The Builder.

No. CLXXIX.

SATURDAY, JULY 11, 1846.

THE Royal Institute of Architects possesses our best wishes, and has had our strenuous exertions in its favour publicly and privately. It does not, however, follow that we must be satisfied with all the acts of the council, negative and positive, or refrain from commenting on them, even though our comments might strengthen the hands of those opposed to it. The Institute possesses considerable power (it ought to have even more), and may effect much good. It is our duty to see that the council avail themselves to the utmost, of the means at their disposal with a view to that end; and if they do not do so, to point out their errors and urge them to amend.

If we acted otherwise, we should shew ourselves unworthy of the confidence the public are pleased to place in us.

In our notice of the annual general meeting, in May last, it was said there were some points in the report of the council then read, to which we objected, and should allude on another occasion. The matters in question are, the limitation of the age of competitors for the royal medal to twenty-five years, and the proceedings in respect of an inquiry into professional charges and responsibilities. We will speak of the latter first.

"Towards the close of the last session," says the report, "a committee was appointed 'To inquire as to the custom of architects, in respect to professional charges, and other matters connected with the practice of the profession, with such recommendations as they may think fit to ensure a uniformity in such proceedings.' This committee, consisting of some of the most experienced members of the body, had numerous meetings from time to time during the session and vacation; and it appears, from their report, that they found the most perfect unanimity to prevail amongst the members, on all the more important questions connected with the practice of the profession, on the liabilities and responsibilities of architects, and as to the usual and accustomed remuneration for their services under different conditions. The information thus obtained, and embodied in the minutes of the committee, and available for the use of the members in general, will it is presumed be peculiarly valuable on occasions when questions may be submitted to the council for their consideration and advice, as they will now be enabled to deliver opinions with the weight and authority of the profession in general, as represented by the Institute, instead as heretofore merely expressing the opinions of individual members."

In other words, this says, they do not propose to publish, or even to allow the members to become acquainted with, the unanimous opinion of the profession, excepting in reply to specific questions; a resolution, as we think, greatly to be deplored.

Architects labour under a disadvantage in respect of their charges, and it is to the Institute they would naturally look for assistance. It is not so much that they require information themselves, as that it is desirable the *public* should be informed; and we must think, that if the council would publish a well-considered report on the subject, they would greatly serve the profession,—in fact, that it is their duty to do so. Such a publication involves a responsibility they may say. Doubtless; but no more responsibility than they should be prepared to bear and maintain. If architects fear themselves to assert their own position and claims, they must not be surprised to find them questioned by others. The policy which rules at the Institute, is much too timid, if not too narrow. Enough, however, on this head until the members again meet; and let us turn to our other objection which more immediately presses.

A fortnight ago, when we gave the particulars of the competition for the royal medal,* we expressed in the briefest manner our dissent from the limitation of age, and regret that such an arrangement had been determined on. Brief as it was, it has served to elicit proof that the same opinion is entertained by the majority of persons interested in the matter; and we seriously call upon the new council to consider the possibility of immediately rescinding this unwise and injurious determination.

The longer we reflect on it the more unfortunate and extraordinary it appears.

It will scarcely be believed that, only a few weeks before this limitation was decided on, the council, in their circular advertisement of the subjects proposed for the medals of the institute, and the Soane medallion, addressed the following remarks to the public:—

"The object of the institute is not merely to draw the attention of the students, and younger members of the profession, to the important theoretical and practical subjects which are annually brought forward as subject matter for the prize essays,—they have a still higher aim;—they would wish to enlist the *experience*, the *judgment*, and the *taste*, of those *profoundly acquainted with the several departments of the art*, whether members of the institute or not; in the hope of collecting a series of authoritative essays upon every branch of architecture, considered both as a fine art and a science, so as ultimately to form an important body of information on architecture, both decorative and constructive.

The institute trust that this appeal to professional men will not be in vain, and when they consider the honoured names of Palladio, Chambers, Rondelet, Smeaton, Tredgold, Nicholson, Krafft, and others who have done so much, and deservedly gained so much honour in like investigations, they cannot but confidently hope that many other men of erudition, taste, and science, will be induced to add in like manner to the stores of architectural knowledge."

The Institute wish very properly to enlist the experience and the judgment of practised men; but the medal graciously presented by the Sovereign to advance the art and science of architecture—the greatest honour they have to bestow—is not to be open to such candidates. The council should have ennobled this medal to the utmost, and made it open to all, so that, like the corresponding medal given by the Royal Society, it might be an object of ambition to the most eminent in the profession. Architecture has few or no honours. By the course pursued they are not only throwing away the opportunity of creating one, but are actually, as would be found in practice, lowering the worth of their other medals.

It is of little use talking of making another arrangement for *next year*,—the purpose of the medal will be fixed, its value marked, and we therefore again urge the council to reconsider the arrangement forthwith.

A simple revocation of the limitation, although this will not place the matter in the way in which it ought to stand before the profession, would make the way easier for the restoration of the medal to its proper position next year. And this may be done without any difficulty.

* Page 309, *ante*.

AN ATTEMPT TO ESTABLISH THE NOMENCLATURE OF MONUMENTS AND SEPULCHRES.

THE very unsatisfactory state in which architectural nomenclature at present exists, has been referred to in these pages on several occasions. This state is not confined to terms adopted mainly by those who make the art their chief study, but is not the less remarkable in words of general use. In the papers on piscinæ,* we endeavoured to draw attention to this defect, as regards the department of pointed architecture, and Professor Willis's labours towards the same end are familiar to most of our readers. Much, however, has yet to be done, and much time would be saved could the whole nomenclature of architecture be fixed and arranged, not only that part of it which belongs to the art, but also and perhaps even more so, as regards young students, the department connected with building operations. It is not our aim at present to elucidate these subjects of professional importance, but much may be done to clear up the difficulty, which many who have not the leisure to investigate, occasionally labour under in ordinary conversation.

Few terms are so frequently misapplied, as those which relate to memorials of the dead. Some of the best dictionaries are not always perspicuous, and therefore it is not an uncommon occurrence to find the words monument, tomb, cenotaph, mausoleum, vault, and others of that class, applied in senses for which they were not at all intended. It is desirable that these words should become fixed in their proper use, and it would be an interesting inquiry to consider their origin with the customs from which they date, through their various changes and applications, down to the signification, which is attached to them by the best modern writers. The derivation of words is not always a safe guide without great circumspection be used, and the history of the word be considered along with its origin. In words derived from the Latin, the present meaning often varies from that of the original, whilst in the case of the Greek, there is not the same danger of misconstruction, and most of the terms, lately introduced by men of science, are formed with strict reference to the literal meaning.

The origin of the different forms of sepulchre, or commemorative work, must not be omitted, and the custom of disposing of the body, the last consideration being that which mainly influences the forms. The Egyptians, whose object it was to preserve from decay, enshrined the bodies, when embalmed, in "eternal houses." The Romans burnt them on the funeral pile, and collected the ashes, which they deposited in urns in sepulchral chambers. They also buried their dead. The custom amongst the Greeks was similar.

The name "sepulchre" is applied more to ancient than to modern depositories; its use is now usually confined to a receptacle for the dead, hewn from the rock, doubtless from no other reason than that the holy sepulchre was so constructed. Its derivation is through the French from the Latin, the words in the latter language being the noun *sepulchrum* and the verb *sepelio*, which mean *to bury*. It is, however, asserted that it has another origin, and that *sepelio* is the Gothic *filhan*, to bury, with a prefix. With greater probability, it is derived from *sepes*, a hedge or inclosure. The word "sepulchre" in its complete form, meant originally a place for depositing the dead, and therefore may have had a more extended signification than the word "grave." Sepulchres in the form of excavations in the side of the rock, are of frequent occurrence, and the cliffs of Asia Minor, and the city of Petra are full of this description of receptacle of different dates. —"Grave" is a Saxon word, the *f* being altered to *v*, and it is generally understood to mean, a hole dug in the earth to bury the dead in. It may therefore be very different to the ancient sepulchre, and to the modern use of the word. We should hardly call the sepulchral chambers in which the Romans deposited the cinerary urns, "graves," but they are correctly designated as "sepulchres."

At the place where the ashes or the body of the deceased were deposited, it became the custom to place a memorial at a very early period. The heaps of stones and barrows, raised over the grave of the deceased, or cover-

* Vide Vol. III.

ing his body, may be mentioned, monuments similar to which may be found in all parts of the world. Thus originated the tomb, which includes not only the grave, or the sepulchre, but the monument or structure raised above it. The Greek word is τυμβος. Perhaps the best meaning is "a *monument* in which the dead are *inclosed*," so that in effect though not in appearance it is the same as "tomb-stone."—"Cenotaph," κενοτάφιον, from κενος, empty, and ταφη, a sepulchre, was formerly an empty sepulchre, raised in honour of those who had received burial elsewhere. It is now, if properly used, confined to that description of memorial, and should therefore have the same appearance as a tomb.

"Monument" is a word which has the most extensive signification; we hear of monuments of art, national monuments, monuments of events, and monuments of individuals. It strikes us that the use of the word, as applying to the two first, may require to be defended. "Monument," from the Latin *moneo*, to admonish, and *mens*, the mind, is literally a reminder—which calls something to recollection. In this light, every thing in nature is a monument, and works of art are monuments to us, though they were not always so intended by those who produced them. It would, perhaps, be too stringent to argue that "monument" should be the name of those works only which are intended to *commemorate*, yet this might best agree with the strict definition. The column in the city of London has been properly designated a monument, for it commemorates a remarkable event. The Nelson Column is also a monument. Monuments of individuals may be either of living persons, or of those who are dead; it is only the accidental circumstance of there being few monuments of the living, which prevents such works being popularly recognized as "monuments." The Duke of Wellington's Statue in the city has, we believe, never been called a "monument," whilst that which the committee are determined to put on the arch at Hyde Park Corner—though a most remarkable monument for some people, is styled a "testimonial." The equestrian statues of George the Third and George the Fourth are seldom designated "monuments," in which, according to the intent and meaning of the term, they are included. Of monuments of the dead, some, like that in Trafalgar-square, are apart from the grave; and others, like the Nelson Monument in St. Paul's, are near to or over it. Monuments of the dead include *cenotaphs*, but do not always, or necessarily include *tombs*; the former can hardly be any thing but commemorative, whilst the latter may merely mark a spot, have no inscription, being nothing more than the completion of the grave. Monuments of the dead may be either statues, or groups, images of the deceased, or, like the sculptured lion which commemorates the Swiss guards, may have some allegorical meaning. They may be miles distant from the grave, like most of those in St. Paul's Cathedral; they may be erected apart from a sacred edifice, or, according to modern custom, they can be raised within it. We say according to modern custom, for we are not certain that the Gothic tombs are properly to be designated "monuments." They were, at least, erected for a higher purpose than that of modern monuments, which are quite unconnected with religious objects. The first are monuments of virtuous men, or benefactors, not what we have now got to understand by the word "monument." A monument is generally described as erected *to* an individual; "monument of" would be understood to mean a *statue*. Yet we do not erect a monument as a sacrifice, or an offering to the dead, but rather, what the name imports, in commemoration. "Monument to" is therefore incorrect, and the other preposition should be used instead, but without limiting it to a sense to which it is not confined. To describe the form or kind of commemorative work, "monument" is inadequate; it should be reserved as a general term.

"Mausoleum" is a word which has become less fixed in an English meaning than any we have mentioned. It is sometimes understood to mean a building, erected to contain the statues of deceased individuals, or else it is a sepulchral building. There is, therefore, the important distinction of its requiring consecration in the latter case, but not in the former. As it is a term derived from the celebrated building erected in memory of Mausolus, King of Caria, by his wife Artemisia, which was enriched with sculpture, and lavishly embellished, and which is generally considered to have been the place of sepulture, the term should be confined within those limits. It is therefore a magnificent tomb, but is generally built for the interment of several persons.

We have now only to remark, that the word "vaults" is a curious instance of the state in which the nomenclature of the art is at present. A vault, as we need hardly say, is a continuous arch, and from the circumstance that the crypts of churches are "vaulted," and used for burials, any receptacle for the dead which may be below ground, and walled in, has been considered as a vault. It might be thought that we were merely wasting the reader's time in drawing attention to an instance, which many would hold to be insignificant. But it is in this manner, that difficulty is placed in the way of the young student, who, instead of finding the nomenclature a help, as he would in the science of chemistry, can do nothing but regret the constant difficulties and impediments, which the use of one word with several different meanings is constantly placing in his way. We may not get the advantage of a nomenclature equal to that of chemistry, but we may in many cases do much to prevent that of the art becoming worse than it is. One of the first and best endeavours would be the disuse of many of the workmen's terms, which can be better supplied by those in use amongst educated architects, and the assimilation of all terms in construction to those of the metropolis. E. H.

WATER—HOUSE-SUPPLY—DRAINAGE.*

Rain-water being so valuable in a domestic establishment, from its softness, none of it should on any account be lost, and the receptacle provided for it should therefore be so situated, as to collect the drainage from the lowest as well as the highest roofs. Spring-water, on the other hand, being usually the most plentiful, should be forced up into a cistern, at a height sufficient to supply the highest water-closets; that by its use in this and similar ways, the soft-water may be saved for more important purposes. For rain-water, the best reservoir seems the underground tank; in the ground, scope is afforded for forming a much larger receptacle than could with convenience or sightliness be constructed above it, and the strength necessary to render its sides adequate to the pressure within is more easily obtained, the water, likewise, is kept at a more equable temperature. To give this arrangement full effect, there should be a well some feet deeper, sunk to receive the water from the tank in a state ready for use; the communication drain extending underneath the latter as far as its centre to receive the water as it percolates from the filter. The latter should be a small enclosure built with bricks, the bottom formed by a large perforated tile, situated immediately over the drain and supporting the filtering strata in the order we have before described.

The tank is most suitably situated in the centre of Kitchen-court; it is best of an oblong form, built of hard-burnt bricks in Roman cement, stoutly arched over, and with a man hole in the centre, covered by a stone flag with lifting ring, flush with the paving or gravel; the bottom should consist of an inverted arch, both for strength and convenience in cleansing. The level at which the influx drains terminate at it will be regulated by the fall from the down-pipes; this, for water, need not exceed the rate of 1 in 100, or say one-eighth of an inch in the foot; but as their terminations should assimilate, so that they may all enter at one level in the upper part of the tank, the fall of the longest drain should regulate all the others: at the same time it will determine the level for building the tank; and upon these circumstances it will also depend whether the stone covering to the man-hole is placed immediately on the opening, or the latter has to be continued upward with a shaft to receive it. The overflow drain should be situated a little lower than the influx drains, and should be trapped somewhere in its length to prevent the approach of small animals to the tank. The well, like the tank, should be built with Roman cement. We have generally placed it under the scullery window, extending rather more in than out, the wall arching over it below the ground line, and the mouth covered with a slab of flagstone, having a hole in it for the pipe of a small lift-pump above in scullery. It should be remembered, that drains of curvilinear section, especially in the bottom, are much superior to square ones for promoting the flow of water through them; and that, as in pipes, the more equal and uninterrupted their diameter, the more easy their sweeps, the more free from asperities their interior, and the better they are filled, the less will their discharge be retarded.

To revert to the uses of spring water: the force-pump for raising this to the high-service cistern before mentioned, should be situated on the ground story of offices—say in scullery—near the lift-pump of soft-water well, and should have a tap at that level, for affording a supply for kitchen uses, if it is preferred; the main or rising service-pipe should be accompanied, side by side, by a small warning-pipe, open at bottom, to give notice when the cistern above is full; and an overflow-pipe, of sufficient capacity, should lead the surplus water into the nearest soil-pipe, so long as the pump continues its supply after the cistern is filled to its maximum height.

We would here advert, though it may perhaps be considered somewhat foreign to the subject in hand, to the waste of liquid manure—perhaps the most valuable of all—which is involved in the usual system of draining. We have, by the arrangements already indicated, provided for rendering available, with the utmost advantage, the rain-water collected from the roofs; and also that the water-closets should be supplied only with hard water; now we would suggest that the overflows from cesspools should not be made mere channels of waste, but should be led to a capacious well, for the use of the gardener. It is well known that rain-water is far better than spring-water for promoting the growth of plants; this is from the former containing that which is a necessary ingredient in their formation—namely, ammonia; and which is abundant in liquid manure. The efficacy of this may be soon developed, by sprinkling one half of a grass-plot with spring-water, and the other half with water in which pounded carbonate of ammonia (about one ounce to the gallon) has been dissolved; the former will keep it alive, but the latter will give it vigour and luxuriance.

The *rain-gauge* is an instrument of simple construction, consisting merely of a vessel to contain the water, with a funnel-mouthed pipe to receive and conduct it in, and a scale by which to estimate its quantity; perhaps the best plan would be to make the width of the vessel four inches by three, or twelve square inches, and divide its depth into twelfths of an inch; thus no separate scale would be necessary, and every twelfth in depth would count one inch cube; if the twelfths were further subdivided into tenths, the quantity would then be given in inches and tenths of an inch. A method has been contrived for keeping the funnel mouth at right angles to the falling rain. A large vane acted on by the wind causes the gauge to turn round on a pivot, so as to allow the funnel, by means of another vane which is attached to it, to incline over according to the strength of the wind, so that its mouth shall face the rain as it falls. The following is stated to be the annual fall of rain at different places in Great Britain and elsewhere.

	Inches.
Bombay	82
Calcutta	81
Vera Cruz	63·8
Plymouth	44
Lancaster	39·714
Rome	39
Dover	37·52
Dumfries	36·919
Manchester	36·140
Liverpool	34·119
Chatsworth	27·664
Edinburgh	24·5
London	23·10
Glasgow	21·331
Paris	19·9
Petersburgh	17·5
Uleaberg	13·5

For preserving water from corruption for a long period, or indeed for any length of time, there seems to be nothing equal to charcoal. This appears to be owing to its peculiar property of absorbing the gases and putrid particles immediately they are formed, and thus

* Continued from page 314, *ante*.

preventing them from acting as a ferment to the rest of the water. Certain it is, that if a quantity of charcoal is thrown into water which has been long kept, or has become foul by being in contact with putrid substances, the water will become sweet in the course of a few hours: it should be perfectly well burnt, and kept from exposure to the atmosphere; if good, when pulverized, it will sink rapidly in the water. This property in charcoal, of resisting the action of putridity, has led to charring the inner surfaces of casks for containing water during long voyages. That its conservative power was known in very early times we have evidence in the ancient practice, still in use, of charring the points of piles and stakes intended to be driven in the ground. Water has been preserved, it is said, for seven years, by adding to it oxide of manganese, in the proportion of 1½ to 250, and agitating the liquid once a fortnight.

A knowledge of the pressure and motion of homogeneous fluids is essential to the proper disposition and proportionment of all hydraulic apparatus: where these are on an extensive scale, it will often obviate very serious mishaps. In obedience to the law of terrestrial attraction, otherwise gravitation, water, like other bodies, naturally presses downwards; but besides being subject to this general law, it is governed by another—that of equal pressure, which urges it alike in all directions, owing to that want of cohesion among its parts which is the characteristic of fluids. Pressure in proportion to its vertical height is a leading feature, and suggests, that the deeper we make a cistern, with a due regard to the strength of its several parts, to withstand the lateral pressure of its contents—if at the same time we lower the outlet—the more efficient will be the discharge. This last principle is one which should be held prominently in view; it makes no difference as to pressure whether we plunge our hand into water in an ordinary vessel, or to the same depth in the sea; the boundless ocean, when still, presses with no greater force against a sea-wall, than the water in a reservoir of equal depth does against its side—the force being ever as the depth, quite irrespective of breadth.

Since all parts at an equal depth press equally in all directions, and the pressure is as the depth, if we suppose a given thickness at the bottom of the side of a rectangular cistern, full of water, to be adequate to the lateral pressure at that level, then a straight line drawn from the outer extremity of that thickness at bottom up to the inner extremity at top, will give sectionally a tapering boundary, whose varying thickness will be everywhere adequate to the pressure at whatever level. Hence, the average pressure will be in the middle of the height, at the centre of gravity; and the deficiency above that point being just compensated by the excess below it, the pressure diffused over the entire side will be in the ratio of the average pressure; consequently, as every point in the base is loaded with a weight equal to the force which presses against the bottom of the side, or to the entire weight of the fluid, it follows, that when the bottom is equal to the square of the height, otherwise when the cistern is a cube, the weight on the bottom will be to the pressure on the side as the bottom is to half the side, that is just double; and as a necessary sequence, it will be to the pressure on the whole four upright sides as the bottom is to the entire upright surface, that is just half; this we say in the case of a cube, for it is obvious that the same proportions will not hold good in other cases, although their ratio will.

To find the load on the bottom of a cistern, multiply the cubical contents in feet by 1,000, and divide the product by 16, which will give first the ounces, then the pounds avoirdupois; or multiply by 635 which will at once give the pounds; then as the imperial gallon of water weighs 10 lbs., divide by that number if the quantity in gallons is required. To find the pressure against the vertical sides, multiply their area by half the depth, and the product will be cubic feet, whose weight is equal to the pressure. For computing the contents in various curvilinear forms, it is convenient to know that the cubic foot,

containing *exactly*	1728 cubic inches,
contains *very nearly*	2200 cylindrical inches,
or	3300 spherical inches,
or	6600 conical inches;

thus, a vessel of any of these forms, having its height and the square of its diameter multiplied into each other, and the product being divided by the number given, the quotient will be its contents in cubic feet. It will be seen that it embraces the cylinder, and is, therefore, applicable to ascertaining the contents of pipes, wells, &c.; also that the load on the bottom is thus ascertained. The pressure against the cylindrical or vertical surface of the latter, as in the case of a vessel of rectilinear figure, is found by multiplying the area of the upright surface by the depth of the centre of gravity, or half depth of the liquid—both in feet—the product being the effective pressure. The pressure in a hemisphere is found by multiplying the spherical surface by half the depth of the water.*

The law of equilibrium being established, it follows that the load on the base may, under particular circumstances, exceed the weight of the fluid contained; for supposing the vessel to be in the form of a frustrated cone or pyramid, and full, the deficiency of fluid in the parts surrounding the uninterrupted column in the centre, will be compensated by the resistance of the sides, causing the fluid, since it cannot recede from that force, to press in the direction of it. If the pressure in those parts were at any time less than it was elsewhere, the fluid would move towards them, and not become quiescent till the equilibrium was established; and hence the pressure every where the same. The pressure, then, being as the maximum height, the base of the cone or pyramid, has to sustain every where a load equal to that which acts on its centre.†

JAMES WYLSON.

THE YOUNG ARCHITECTS OF ENGLAND.

BY ONE OF THEMSELVES.

SIR,—Had we a Thackeray in *our* world, like him with whom the world of "snobs" is blest—or curst—to trumpet forth its secrets, doubtless said world of ours is rich enough in fun to furnish some most sapid subjects for his kitchenry.

Your last week's leader, Sir, leads me to this train of thought; your shrewd remark, that certain letters of the young and rising are chiefly remarkable, after "exclusive attention to pointed architecture," for, secondly, "great *self-conceit*," has here set one of the youngsters to think that a few words on the same subject, more closely directed, might serve a good end.

Perhaps, Sir, you may see in these very lines of mine the marks of the very "self-conceit" (homely but serviceable phrase!) which you seem so to deprecate. If so, I am shameless enough to glory in it, and to be in but little pain as to how much choler it may excite, or how much cold disdain it may receive. Self-conceit, Sir, is a valuable thing: I should have but poor hopes of your editorship if I thought you lacking in the same. The words of a friend, a man of eminence in the literary world, I think are good: "Self-conceit," says he, "is a sillyhow that envelopes a man; puncture it, and the man dies." Look abroad upon the world, Sir, and you will find it so. Your conceited man is the man for obloquy now, and fame for ever. His self-conceit is his life-preserver. It is this remaining full-blown that buoys him up,—that keeps the often weary swimmer from yielding to the current—sinking down into the common world—drowning in the calm depths of insignificance. Thousands resign themselves to seeming fate, and sink, tired of the wind-troubled surface: a few struggle on, the storm still raging; their brethren are at rest—beneath; *they* are in tumult, but it is *above!* Your aim, Sir, ought to be, not to resist the "self-conceit" of the young and ardent, but to *guide* it. Will you permit me to attempt this task for you?

But, first, to vindicate the general tendency—the *spirit*—of Young Architecture (Young England, we have, Young Hickory, Young France, young every thing else; and wherefore not *Young Architecture*, then, in these bold radical days?)—to vindicate the spirit of Young Architecture, I must constrain myself to say (with all becoming reverence and awe for your authority) that I should have liked your leader better had it been amended by omitting from the words, "Where, first unadorned," to the words, "aerial rise," and substituting something of *argument* instead; seeing that the testimony of *poets* is no argument with Young Architecture. No wonder, Sir, that "our student friends look scornfully on the 'orders,'" when they—*we*—read of the "manly" Dorie, the "decent matron" Ionic, the "wanton" Corinthian (O fie! "Shame! where is thy blush?), and the Composite thus made to be "of doubtful character," as some one says, and as we willingly allow; no wonder (to be serious) when we have this quoted, and find it believed in and acknowledged, that we, if we be *artists*, should "turn up our noses," as you have it, not at Sir Christopher Wren, but at such as wear his shape, and have none of his substance. Sir Christopher to one of these? "Hyperion to a satyr!" The dome of St. Paul's to the dome of the National Gallery!

Although I generally "go out into the same lobby" with Young Architecture (frequently "only more so," as the old joke hath it), I am not altogether one of the "student friends" whom you see fit, and justly too, to rate so soundly. I do *not* hold Michael Angelo "a man of very bad taste in architecture."* But neither do I agree in the inuendo of this, that "a Goth, for instance, is mistaken when from education, he imagines the architecture of his country to be the most perfect."† Instead of "turning *up* the nose" at Sir Christopher Wren, gladly will I turn that organ of expression, Sir, in any assigned direction whatever, if not personally inconvenient or contrary to statute,—any possible way you may direct whereby I may be understood to contribute to his honour and architectural glory. But at the same time, I would do likewise to him whom worthy Dr. Hutcheson above, in his innocence, calls "a Goth." And thus far you and I, Mr. Editor, I suppose mainly agree. But—*farther?* I hope much farther still, for although thus complacently inclined to give both their due, I do not hold myself bound by reverence for antiquity, to allow to either a single atom of weight *more* than his due. In short, I take Greek, and Roman, and Cinquecentist, and "Goth," and *every one else*, for just what I think him worth *and no more*. To bow to antiquity is to believe in ghosts and hobgoblins because we believed in them, in memory-hallowed "long, long ago," or because our grandmothers happen to believe in them still. *We* are the true *ancients* (it has been well said); our forefathers were younger as a world than we. But *Antiquity* is a thing that any one can comprehend who happens to keep sight of his arithmetic; while *Art*, and here is the key to much matter of wonderment,—*Art* is a thing which calls for more knowledge in him who would judge of it. The antiquarian-critic needs only to keep in view his "rules;" the artist-critic looks beyond these "rules" to principles of nature, and criticises (though to the bitter nausea of the orthodox) the very "rules" themselves. And Young Architecture, as I understand him, would be *an artist;* and "the more so" that I (humbly) sometimes feel that he ought to be *more an artist than he is*. The drift of your leader, Mr. Editor, is (if you will allow me) to make him *less* an artist. Perhaps it is unintentionally so. If your principles of liberalism can be so far stretched as to tolerate one so latitudinarian as I, and to permit him to speak without the shadow of fear, boldly and honestly (although in all *decorum*, I will promise you) I should feel honoured in being allowed the medium of your journal for the development of the views I have now expressed, in a few sketches like the present; my object being simply to lead the student in our profession to go beyond *dogmas* to principles of reason. I am hardy enough to fancy that I have done so. And the result is, not that I love Greece and Italy, or Germany and England less, but that I love Nature more.

If, then, I may find favour in your editorial sight, I shall not be an anonymous writer (a

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* The relation which the diameter of the circle bears to its circumference; Or which the square of the diameter of a sphere bears to its surface; Or which the curved surface of a cylinder bears to the product of its length multiplied by its bore, } is nearly as 1 to 3·14159, or a little less than three and 3-20ths.

The square contents of the area of a circle will be found by multiplying the circular contents (obtained by squaring the diameter) by the decimal ·7854.

† To be concluded in our next.

* Hosking—"Treatise on Architecture."

† Hutcheson—"Inquiry concerning Beauty and Virtue."

thing not altogether lovely) when I reach the end; but in the meantime, that the Ayes may fancy me all that is needed for an authority, and that the Noes may "lay the flattering unction to their (negative) souls," that I am but a nameless scribbler,—that both may thus have their sweet complacency unruffled, for I like to see folks pleased,—and that both may judge of *what is said* independently of *who says it* (the great principle I advocate),—I shall hide myself under the modest signature of R.

London.

*** Our good-humoured correspondent misconstrues the article referred to. *Magnanimously*, however, we give him the full benefit of his own statement now, and promise due consideration for his future communications.

FOREIGN ARCHITECTURAL AND COLLATERAL INTELLIGENCE.

The late Excavations at Salona.—It seems that the *admonitions* addressed to the authorities of Dalmatia by an eminent archæologist have had their effect, of which the above may be considered the first result. On this occasion, it is very justly observed by the German periodicals, that it is far better to have left antiquarian treasure untouched, than to see it rifled and spoiled by the hands of strolling and untaught collectors and hawkers. It is, moreover, to be borne in mind, that as such people only value what they can carry *away*, the most valuable remains of temples, sepulchral monuments, *Columbaria*, palaces, and private dwellings, are wantonly deprived of those smaller accessories, which nevertheless give them only their true and historical value. In this way may be excused, that the excavations at Salona, begun so early as 1821, were again discontinued in 1828. It is owing to the zealous and patriotic professor Carrara, at Spalatro, to have broached this subject anew, and his majesty the Emperor at once granted the necessary means for effecting this purpose in a business-like and grand manner; and it is said that even an especial commission is to be instituted, presided over by the lord-lieutenant of the province.

The aim of the excavations is double—first, to ascertain the topography and the plan of the ancient Salona; and second, to get possessed, in a *systematic* way, of the antiquities which will be met with. Mr. Carrara began his operations near the ancient wall surrounding the city, in January last, and already forty-two towers and their connecting parapets have been brought to light, affording much information on the military buildings of the Romans, and their subsequent uses by the barbarians of the north. In following up the line of circumvallation, a paved street, leading from a newly detected gate into the interior of the city, has been laid open, along which runs an aqueduct (*sewer?*); and an ancient bath, and an octogon temple have been also discovered. The present operations will continue until all the remaining temples, basilicas, thermes, and other show-buildings of the once famed residence of Diocletian, shall have been brought to light;—who, after his abdication, had retired amongst the structures and gardens of Salona, to the enjoyment of study and contemplation. The hitherto acquisitions of bronze and marble works, mosaics, medals, &c., bid fair for further valuable acquisition; the more so, when the excavations, which were hitherto merely carried on in the outer periphery of Salona, will have reached the more central portions of the city.

The Great Hamburg-Berlin Line. — This line had to contend with many difficulties, amongst which the necessary building of a branch line to Lauenburg, and the unfavourable position of the Berlin terminus were the chief; while, on the other hand, the uniform level of the line, as well as the lucrative branch line of Wittenberg-Magdeburg, may be considered fair offsets. Up to May, 31¼ miles (German) had been completed, and only 4¼ of the proper line remained unfinished. Of the 300 bridges laid down in the plan, 184 were ready, and 60 in process of building. The grand terminus of Hamburg, and the communication with the wharfs of the Elbe, have also been decided upon.

Railway to Rome! — It seems, that even previous to the accession of the present liberal pontiff, the objections to a line passing Rome had been nigh overcome. A small pamphlet published at the beginning of the present year, seemingly half official, says, that it cannot be asserted, that the papal government had ever properly resisted or declined the making of these roads, as the proposals made in this respect were rather adventurous schemes (*avventurosi projetti*) than business-like plans, bearing the stamp of respectability or responsibility. After this, we may safely say, that *if* a sound and sterling plan be submitted to the present pope, it *will* be accepted.

The Statue-Mania. — German periodicals speak, with much truth, of the above mania, which pervades our age. No sovereign dies, not even a duke of some German *two square miles land*, without a statue or other monument being erected to him. Bankers and all sorts of rich men follow the same wake. Not satisfied to honour the dead, we erect *memorials* even to those who, being still *alive*, are not in need thereof. *We*, certainly, cannot object much to these procedures, in the *way of business*—but if, after all, *public* monuments are to be erected, let it be to such as deserve them, and have had none yet. Families may do with their money as they like—but let the people of this country remember, that Sir Thomas More, Sir W. Raleigh, Cabot, nay, even the monument-maker, Inigo Jones, are yet monument-less names.

Great attention to Railways—seems certainly to exist in Sweden, as the king has convoked an especial meeting of the Storthing of Norvegue, when a railway plan throughout the whole of that kingdom will be laid before the legislature.

"Tradesmen" Exhibition of Industry at Frankfort.—It deserves commendation, as it is worthy of imitation, that the different tradesmen of the above city have formed themselves into a society, who, on their own account, and for their own benefit, have established a show of their products, to which also some art-works were added. They are a branch of the Society for the Improvement of the Working Classes—a subject very energetically carried out in most parts of Germany.

The Nautical Gymnasiums of Paris—a real desideratum of the British Metropolis.—As the huge school of natation, Quai d'Orsay, has proved to be insufficient for the increasing *sanatory* and gymnastic exigencies of the French capital—another on a similarly vast scale is to be established in the Champs Elisées. It could not be well anywhere else, than near the five great steam-pumps of Chaillot—as it requires the enormous quantity of 80,000 litres (pints) of purified water, heated to 40° Réaumur, *every hour*. This hot water, in being brought in contact with an equal quantity of cold, will form a sort of flowing thermal rivulet. The statistics of popular bathing and natation in Paris, will still more prove the necessity of similar establishments with us. The different colleges and private schools of Paris contain 110,000 (?) pupils, of whom if only 30,000 were to frequent the nautical gymnasium ten times a year, would yield an income of 300,000 francs. A total population of 1,200,000 inhabitants, with 300,000 strangers, may, without exaggeration swell the above sum by 250,000 francs. The nautical gymnasium of the Champs Elisées will occupy an area of 2,400 mètres. There will be a winter garden, a flower market, hot and warm houses for the exhibition of plants, with ample covered places for walking and lounging added to the establishment! [The establishment of such places is still more necessary with us, where a murky and hazy sky for months together—makes every promenading in the open air doubly irksome].

Medieval Antiquities of Rhenish Prussia.—The restoration of ancient monuments has been carried on of late with great energy, which is not only owing to the art-love of the king, but now even to popular impulse. But the execution does not seem always equally felicitous. Even the placing of the fine columns in the Aachen Minster, although they have existed originally, has not been done with proper discernment. Then, new Corinthian capitals have been made, while the old ones are still existing. The whole effect, however, cannot be judged of, until the ugly stucco ornaments of the whole octogon have been taken down. Another church deserving equal restoring attention is that of St. Adalbert, a Roman basilica built on a rocky prominence under Emperor Otto III. That the old civic jail of Aachen, called *Gras*, has not been taken down, is owing to the exertion of Prof. Bock. To him is also owing the complete restoration of the town-hall.

Statue of the Emperor Charles IV.—This statue is destined as a commemorative of the fifth centenary of the Prague University—the oldest in Germany. The model has just been exhibited in Mr. Burgschmied's workshop in Nürnberg. It is 14 feet high, and weighs 40 cwt. The emperor—a graceful, manly figure—is represented in the act of surrendering the charter of the university; the crowned head slightly bent. The costume is historically true, the *pallium* covering the rear part of the figure; the folds full, yet graceful. The under garment is covered with lilies, and on the right-hand side hang down the rich tassels of the girdle; the sword adorned with a large, artfully-wrought guard. The contractor, however, has undertaken the difficult obligation of delivering the whole work, including a sculpture pedestal, to the Prague committee, at the end of the year 1847. The price is 80,000 fl. (9,000*l.*)

Canalization and Barrage of the Tiber.—An association of capitalists at Rome have made a proposal to government to canalize the Tiber from Ponte Felice to its embouchure, and to make it navigable for larger craft. They propose to build a harbour at Fiumicino, and thus establish a direct steam communication between Rome, Leghorn, and Naples, which would do away with the necessity of going, as heretofore, to Civitavechia. (As a plan has been before brought forth to dig up and drag the Tiber for its *antiquities*—of which, certainly, there must be many in its bed—both parties combined would be sure to do well.) J. L——y.

ARCHITECTS' GRIEVANCES.

Sir,—Without entering into a disquisition on the difference between intellectual wealth and the wealth of the pocket, or the different degree of protection afforded to each by a mercantile people, it will suffice for the present to call your attention to the following case; for I perceive it is your most anxious desire to do all in your power to lessen professional grievances.

Fourteen years ago I made designs for a bridge across the Thames near the Red-house, Battersea, which were exhibited at the time in the Royal Academy, and other public institutions. Surveys and models were made, soundings taken, property ascertained, and considerable progress made in the formation of a company to effect the undertaking. The purpose of the bridge was threefold—to afford a passage for the usual traffic, for railway carriages, and for funeral processions, as I intended to appropriate five or six hundred acres of the Battersea-fields for a West London cemetery; the whole of this plan formed part of a grand scheme of metropolitan improvement; but speculations of this kind were not so popular at that time as at present, and it has remained in abeyance.

Entering one of the committee-rooms of the House of Commons yesterday, I found there a committee and a host of official gentlemen under Government, busily engaged passing the clauses of a bill for, among other things, erecting a bridge over the Thames, near the Red-house, Battersea. Surely, Sir, this is an apt illustration of the text, "One soweth and another reapeth." I mentioned to one of the landed proprietors whom I saw in the room, that he would now get what I purposed for him fourteen years ago, and passed on my way with feelings which may be readily imagined by those who have similarly suffered.

I am, Sir, &c., W. Bardwell.

4, Great Queen-street, Westminster,
4th July.

Rating of Tenements.—A Bill has been introduced into the House of Commons, entitled "A Bill to provide that the owners of tenements of small annual value shall be assessed to the rate for the relief of the poor and the highway rate in place of the occupiers." It proposes to rate the owners of tenements which are under the net annual value of 6*l.*

THE AWNING TACKLE NUISANCE.

Sir,—Though as yet but a stranger, and a very brief sojourner in your magnificent city, I can already fully corroborate the truth of your remarks in The Builder of to-day, upon the apparent insecurity of many of the balconets by which the windows towards the streets are ostensibly *protected*.

I am astonished, in fact, that any one arrived at years of discretion should ever, either with or without thought, trust his precious weight for even one moment to many of those precipitating traps which I have seen projecting themselves, and ready, it seems, at even one moment's notice, to project others who may be foolishly tempted to trust in their protection, out of first floor windows into streets and areas.

But my chief purpose in addressing you at present, Mr. Editor, is to call your corrective and influential attention to other projections than those above, projections in which *a stranger* at least,—though strange to say *not a citizen*, it would appear,—regards himself as one immediately and personally interested. I mean that abominable awning-tackle nuisance, which so frequently projects from shop w indows into the very faces of the passers by.

I admit that I for one, as probably you yourself, Mr. Editor, also may, stand considerably above the "average height of Englishmen, namely, five feet seven and a half," being, in fact, six feet, and somewhat indefinitely *upwards;* but surely the metropolitan shopkeepers ought to be compelled to elevate these nuisances clear of the extreme height of the hats and heads of all and sundry the lieges; whereas I do not exaggerate when I state that until I was taught by practical experience to steer carefully clear of these inexorable sticks of office, my beaver was doffed for me, nolens volens, and rolled into the kennel regularly twice, thrice, and upwards, every day.

As some little compensation, certainly, I must admit that, on the contrary, it was one day lately very unceremoniously, and to my no small astonishment for the moment, driven downwards nearly over my eyes, by an altogether different sort of impulse, communicated from above by a bundle of boots and shoes, which dangled freely in the breeze at the extremity of a long elastic pole, projecting boldly, *et error nullus*, into the very middle of the pavement in Oxford-street. But I relish neither such doffing nor such donning, and can only account for the silent endurance of nuisances such as these, amongst "Englishmen of five feet seven and a half," by the dignified reflection, unavoidably induced not only by this, but by other occasional inconveniences and evils with which, since I came to town, I have had the (perhaps exclusive and peculiar) misfortune to contend, such as with the insufficient length of bedsteads and sofas, and sometimes with the equally insufficient height of doors and ceilings, that I must here be a Gulliver in Lilliput, however preposterous it may appear to you, Mr. Editor, for a humble unit like myself, to designate this mighty Babylon by so diminutive a title.—I am, Sir, respectfully, at all events no *general* nor *particular* Homunculus.

GLASS TILES.

It appears from the "Patent Journal" of 4th instant, that a Mr. John Russell of Edinburgh, an accountant, has obtained a patent, dated 30th December, 1845, and enrolled 30th June, 1846, for the "manufacture of glass tiles," a circumstance which surprises us a little, as we very much doubt whether an alleged invention of such a date, entitles this patentee to the exclusive manufacture of glass tiles; indeed, it is not very clear, in his own specification, what is the extent or limit of his claim; for he "wishes it to be understood that he does not lay claim to the *mode of shaping* or manufacturing the glass tiles; but what he claims *is the form or shape* of the glass *for roofing purposes*."

His "invention," it is said, "consists in forming pieces or sheets of glass of convenient size, with two of their respective or opposite sides bent or turned up about half an inch, or from that to an inch, according to the size of the tile required, so that the two opposite sides will stand perpendicularly to the plane or surface of the glass, the flanges being so turned that the plane of the tile will be broader at one extremity than the other. The flanges may be turned at any angle, either inwards or outwards, as occasion may require, or else curved," and the "tiles can be formed at any angle or curve, so that they may be fashioned into hips or cupolas for domes or arcades, and may be made of stained or coloured, and also opaque glass for roofs."

"The roof for supporting the tiles is built in the usual manner, with rafters and laths between them, running parallel to the side walls for the purpose of receiving the flanges of the tiles. The apertures between the flanges may be filled up with putty or any other suitable cement, and covered with a hollow bead of metal or glass, or else a thin slip of metal may be first screwed to the laths, and then brought between the junction of the tiles, and turned over at the ends."

PROVINCIAL NEWS.

The Norfolk Estuary Bill is likely to become law, and to be brought into speedy operation. The tracts of land sought to be reclaimed and brought into cultivation under the provisions of this bill comprise about 31,000 acres, including 2,000 to 3,000 acres of the Green Marsh, private property, portions of which, adjacent to the respective estates, are claimed of the crown, though thus alone reclaimed. The cut and channel intended to straiten the course of the Ouse will proceed inland from Lynn Harbour to Howard's Sluice, and thence through the sands for eight miles to Lynn Roads, near the West Mark Knock Beacon. After satisfying the claims of the frontagers, about 14,000 or 15,000 acres will remain beneficially available to the company, of which, on Sir John Rennie's evidence, about 6,000 acres will be reclaimed in six years; but ten to twenty years may be expected to pass away before the remainder is reclaimed. The estimate for the whole works amounts to 500,000*l*.——The new dock works at Hull, with the pier and jetty, are in active progress. ——On the 1st instant the Bishop of Carlisle consecrated the church at Renwick, which has just been built and enlarged.——The new church at Upperby also was consecrated by the bishop of the diocese on Tuesday last week. ——A window of stained glass has been put up in the Abbey Church of St. Albans by Mr. Clutterbuck, of Stratford, Essex.——On the 24th ult., the foundation-stone of the new chapel for the palace of the Bishop of Ripon was laid.——It is expected that Prince Albert will lay the first stone of the Birmingham Baths on his way south from Liverpool.—— The Lords of the Treasury have granted a site for the erection of a church in the St. Thomas's district of St. John's parish, Coventry. ——On Friday and Saturday last no less than three new churches were consecrated at Manchester—namely, St. John's, Longsight, erected by the Manchester and Eccles Church Building Society, at a cost of 4,000*l*.; the terra-cotta church erected by Mr. T. C. Worsley, in Platt-lane, Rusholme, at a cost of 3,600*l*.; and the church of St. Stephen's, Audenshaw. We shall give some account of the first of these, next week——From a report to the Liverpool Health Committee on cellar habitations, it appears, that since the cellars in courts were cleared, in conformity with the health Act, in November 1842, very few have been re-occupied; and that since the street cellars came under the operation of the Act, in July 1844, 2,391 cellars have been cleared of about 8,368 inmates, leaving about 3,620 cellars not conformable to the health Act. The report adds, that 322 informations had been laid against parties who had allowed cellars to be re-occupied, and that the whole of the cleared streets are now under police notice. The receipts of the Liverpool baths and washhouses for the current year have been found to exceed the expenditure by 8*l*. odds, and the demand has so much increased, that 100 persons have been sent away in one morning from want of sufficient accommodation. It is therefore proposed to erect an additional number of baths to be conducted on the same principle with those which have already so well fulfilled their excellent purpose. The cost of the proposed building is estimated at 6,500*l*.——The renovation of Malvern Abbey Church has just been completed.——The Bishop of Chester the week before last consecrated three new churches, St. Michael's, at North Rode, near Congleton; Holy Trinity, at Rainow, near Macclesfield; and St. Peter's, at Elworth, near Sandbach.——Lord Methuen has begun his extensive alterations at Corsham Court, which are to cost about 15,000*l*.—— "A site for a church and churchyard, schools, and residence for a clergyman, at the Ashford railway station," says the *Kentish Observer*, "has been offered by the railway company for the numerous workmen and other persons who will henceforth establish themselves in that vicinity." The company, however, seems to expect the public to assist in providing and endowing the church and schools.——The first stone of the Printers' Alms-house (to consist in the meantime of six houses) is to be laid shortly by Mr. Luke James Hansard, on a plot of ground to be appropriated within five miles of the metropolis. There is a fund in hand of 1,774*l*. odds, of which 600*l*. constitute the site money.——The proposal of the City Lands Commission to erect a new barge house at Kew, at a cost of 1,470*l*. has been rejected by a large majority of the Common Council. ——Mr. Thompson, of Limehouse, has lately completed a wooden church, destined for the diocese of Jamaica. It is dedicated to St. James, and consists of a nave and chancel with stained-glass windows. It will accommodate 300 to 400 persons.

LLANDILO CHURCH COMPETITION.

The committee have announced that they forwarded to the Incorporated Church Building Society, the whole of the plans and specifications submitted by the competitors (fifty-two in number), in order to be guided by the society in awarding the premiums; and that the surveyor of the society stated, that after a careful examination of the whole, he had selected certain designs as appearing to meet the stipulated requirements to possess the most merit, and to be best adapted for the purposes set forth in the advertisement. That in pursuance of this recommendation, the committee award the first premium of 50*l*. to Mr. Edward Davies, Architect, Bath, who designed the plan with the motto "Sic itur ad astra;" and the second premium of 20*l*. to Mr. John Colston, Jewry-street, Winchester, whose plan was transmitted under the motto "Spes." The surveyor has further reported that, amongst the plans submitted in competition for this church, many of them, in addition to those selected, display much taste, and are very creditable to the architects by whom they have been furnished, particularly those sent under the motto "Fides," designed by Messrs. Stenton and Edwards, 89, Charlotte-street, Fitzroy-square, London; and one under a cipher, from which it appears to have been designed by Messrs. Ordish and Johnson, 9, John-street, Adelphi, London. The mottos were not opened until the competition was determined upon.

THE COLOSSAL WELLINGTON.

A scaffolding of great strength has been erected on the east side of the archway at Hyde Park-corner, and the preparations seem nearly ripe for raising the ponderous mass to its ill-chosen destination. The transport and elevation of it will be difficult (we wish, as Dr. Johnson said of a piece of music to which this term was applied, it had been impossible), and will need much care and skill. A correspondent tells us that the carriage, on which it is to be moved, is 24 feet in length, the axle 13 feet 4 inches, with a circumference of 30 inches. The wheels are 10 feet high, or 31 feet 6 inches in circumference; four in number, and weigh 2 tons 6 cwt. each, or 9 tons altogether. The castings are at present in the pit, and "a long pull, a strong pull, and a pull altogether," will be needed, even to lift them thence. Government, it seems, is lending a hand to the work. An eminent contractor estimated the cost of carrying the castings from the artist's studio to the arch, and hoisting them (in three pieces, to do it whole he was not disposed), at 1,800*l*. What the operation is actually to cost we do not know. It is a grievous pity that so much pains and money are to be expended in destroying one monument, and putting another out of sight.

FLIXTON HALL, SUFFOLK.

FLIXTON HALL, IN SUFFOLK.

THE SEAT OF SIR ALEXANDER ADAIR, BART.

This noble structure is pleasantly situated on the river Waveney, between the market towns of Harleston and Bungay, from which latter place the river is navigable to Yarmouth, where it discharges itself into the North Sea, having divided the counties of Norfolk and Suffolk for a great extent of country. It is 105 miles from London, in a delightful neighbourhood.

The building stands upon or near the site of an ancient nunnery founded by Margery, the widow of Bartholomew de Creke, and daughter of Jeffery Hautville, about the time of Henry III. The foundress gave the manor of Flixton to this house, which was dissolved by the second bull of Pope Clement VII. in 1528, when its annual revenue was estimated at 23*l.* 4s. 1½d. and intended for Cardinal Wolsey; but that prelate declining the offer, it was granted to John Tasburgh, whose descendants long resided at Flixton Hall. When this family became extinct, it descended to that of Wyburn, and was afterwards purchased, about the middle of the last century, by Mr. Adair.

The present building was erected about the year 1615. Its old style of architecture is peculiar to the counties of Suffolk and Norfolk; probably it is the best specimen to be found in them. A moat originally surrounded the house, but this has been filled up. The principal front is to the north; the hall and staircase are grand, the apartments large and spacious. To the south was an open portico and colonnade, now closed up, and converted into separate rooms.

The grounds in front are ornamented with extensive plantations, which, united with the fine woods of the park, present to the eye an appearance of grandeur and magnificence, and with the river, have a most beautiful effect.

C. J. R.

ST. WINEFREDE'S WELL AT HOLYWELL, FLINTSHIRE.

The current number of the "Archæological Journal"* contains a plan and view of this monument, furnished by Mr. Poynter, with a notice of its present state of dilapidation, to which we drew attention many months ago. The structure is in the perpendicular style, and may be dated, on heraldic evidence, *ante* 1495.

"The building inclosing the well is erected against the side of the hill from which the water issues, and forms a crypt under a small chapel contiguous to the parish church, and on a level with it, the entrance to the well being by a descent of about twenty steps from the street. The well itself is a star-shaped basin, ten feet in diameter, canopied by a most graceful *stellar* vault, and originally inclosed by stone traceried screens, filling up the spaces between the supports. Round the basin is an ambulatory, similarly vaulted."

"The neglected state of this beautiful edifice having forced itself upon the notice of the inhabitants of Holywell, a subscription was entered into, and the proceeds, about 400*l.*, have been expended in disengaging the chapel from some unsightly erections built against it, in restoring the windows, and in some general repairs necessary to maintain it for the purpose of a school-room, to which it is now put; but nothing has been expended on the crypt, which is, nevertheless, independently of the mutilation of the screens and decorations, in a state to excite the apprehension of all lovers of antiquity. Nor are the gentlemen to whom the expenditure of the fund has been entrusted open to blame on this account. The difficulties of effecting any substantial repair, when it is most likely to be wanted, are great and peculiar; so much so, that it is not easy even to speak with certainty on the actual condition of the substructure.

The water, as already stated, rises with great force from a bed of shingle, on which the inclosure of the basin and the supports of the vaulting have been founded without any excavation; and in order to prevent the effects of the shingle washing away, the overflow of the basin is raised about four feet (the depth is unequal) from the bottom, and the sluices of the mill raise the surface of the water about two feet higher. This depth of water, in violent agitation, even when the sluices are opened, and the water above the overflow let off, effectually prevents the possibility of *seeing* the bottom of the basin, but by sending workmen into the water, it was ascertained that the shingle had disappeared from under the foundations of the walls of the basin, in some places nearly as far as the men could thrust in their arms, and in one instance at least, a squared stone has given way. This disappearance of the foundation, notwithstanding the judicious precaution originally taken to secure it, might appear a mystery, but that the well, in the days of ignorance, was frequented by bathers, who, it is believed, pulled out the pebbles, and carried them away as memorials of the miraculous properties of the water. In the original state of the building, the main basin was protected by the screens, but these have been broken down long enough to allow for the gradual abstraction of the bottom in this manner and to this extent.

Whatever may be the cause, such is the effect, and under such circumstances this beautiful building cannot but be considered in a state of peril, which calls at least for further examination, although as yet the arches do not exhibit any marks of settlement. It is possible that the contingency of the shingle becoming loosened, or washing from under the wall, may have been provided for. There is evidently a

* In this number the view of the cloisters at Windsor Castle, omitted from the last, is given. There is also an illustrated account of the Franciscan Friery at Reading, by Mr. John Billings, already printed in THE BUILDER (Vol. III., p. 500), and a notice, by Lord Alwyne Compton, of a decorated pavement in Haccombe Church, Devonshire.

great mass of masonry in the substructions, and it is quite consistent with what is known of the constructive skill of the architects of the thirteenth century, when they thought it worth while to exert it, to suppose that stones of such large size may have been laid down, that they may continue to support the superstructure in the manner of corbels, but it is not easy either to ascertain the fact, or to apply the operation of *under-pinning*, should it prove to be requisite. To obtain access to the foundations, it would be necessary to empty the basin, and discharge the water as it rises; and in order to effect this, the front of the basin must be taken down, and a channel as deep as the bottom of the basin cut through the outer reservoir, depriving the mill of its moving power as long as the repairs might be in hand. With so formidable an undertaking to contend with, it is cause less of surprise than of regret that the late repairs should have been restricted to the more accessible portions of the building, and that there should be no measures in prospect for its permanent security."

It occurs to us, that hydraulic concrete might be effectively employed, at all events to prevent further injury to the foundations, cheaply and without difficulty.

LABOUR AND MATERIALS IN SOUTH AUSTRALIA.

The *Adelaide Observer*, in order to shew that South Australia "should be pre-eminently the country of the industrious man's choice," presents a list of particulars relative to the wages of labour and the price of materials on 7th February last, from which we extract what is more particularly interesting to our readers:—

Bricklayers are generally in full employment at 5s. to 6s. per day, or in task work at the rate of 10d. to 1s. per yard for nine-inch brickwork, labour only; and scaffolding not included.

Cabinet-makers.—There are few journeymen required at present, the lesser masters working for themselves, being the principal operatives. The few persons employed on task work jobs earn from 5s. to 6s. per day.

Carpenters' wages 5s. 6d. to 7s. per day, according to ability, the highest quotation being for skilled as well as industrious hands. One report with which we have been favoured states, "a few unemployed," but as we have sought for such in vain, we conclude our informant should have written, "a few keeping holiday."

Masons are well engaged at 5s. to 6s. per day.

Plasterers experience no lack of employment; but are generally engaged in task work, for which they often receive as much as 8d. to 1s. per yard (super.) for three coat-work, including ceiling. This price, which is for labour only, and does not include any thing but journeymen's task prices, should (we are told) enable a steady workman of this class to e r 10s. a day beside paying his labourer.

Painters' wages, 4s. to 5s. per day. Present hands not so much in request as to offer inducements for any influx, either of prime workmen or daubers.

Plumbers.—No more wanted at present.

Smiths are generally well employed at 25s. to 30s. weekly. The German blacksmiths, by the George Washington, found a choice of employers.

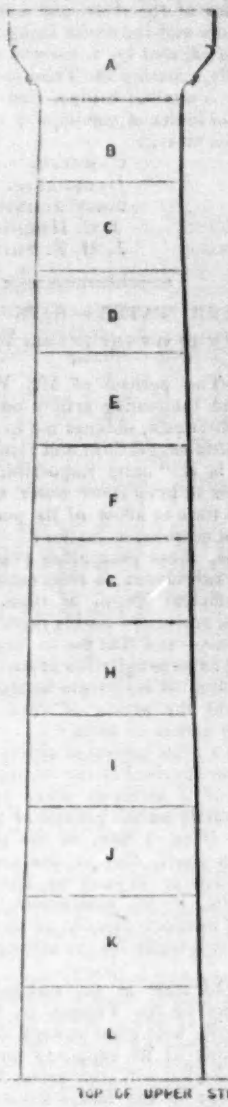
Sawyers are fully engaged at 10s. per hundred feet (super.) for gum or other hard wood; and at 7s. per hundred feet, for cedar or deal.

Building Materials.—Common building stone delivered in the city, for foundations or wall-work, 3s. 6d. to 5s. per dray load; freestone (whit-), squared and delivered, at 1s. per cubic foot; lime 5d. per bushel; river sand (for mortar), 1s. per cart-load, delivered; bricks, 25s. to 28s. per 1000, delivered; slate flagging, 4d. to 6d. per foot (super.); ditto roofing, 4*l.* 10s. per 1000; ridge tiles, 4d. each; joists, principals, purlings, &c., of gum or stringy bark, 6 inches by 2, are sold at 1½d. per foot run, and larger scantling in the same proportion; flooring boards, 7 inches by 1 inch, at 10s. per 100 feet run; battens, 12s. per 100 treble measure, being equal to 4s. per 100 feet run; Baltic deals are selling at the rate of 8d. per foot 9x3; inch board from ditto, at 3½d. per foot run. New South Wales cedar may be obtained in the log, or sawn, at the following general rates—namely, logs, at the rate of 2½d. per foot super. per inch; boards, 5d. to 9d. per foot super., according to breadth, quality, and condition.

MEASUREMENTS OF THE FALLEN BLOCKS OF A COLUMN OF THE PARTHENON.

In accordance with the request of a correspondent, made some time ago, Mr. Scoles has favoured us with his measurements of the fallen blocks of a column of the peristyles of the Parthenon, in order to test the truth of the law of the entasis, communicated by Mr. Penrose to the Institute of Architects.*

All the measurements of the diameters are taken to the back of the flutes, in feet, inches, and tenths of an inch.



	Height.	Diameter at base.
A (capital)	2° 10′ 0″	4° 6′ 72″
B	2 7 5	4 8 15
C	2 9 6	4 10 25
D	2 7 8	4 11 7
E	2 11 1	5 1 35
F	2 11 9	5 3 9
G	2 7 8	5 4 35
H	2 11 15	0 0 0
I	2 10 25	5 7 1
J	2 10 6	5 8 25
K (course wanting; not measured)	0 0 0	5 9 25
L	0 0 0	5 10 7

Height of K and L together, about 5 feet 8 in.

ART-UNION OF LONDON.

SCULPTURE COMPETITION.

Twenty-one pieces of sculpture have been submitted to the Committee of the Art-Union of London, in reply to their offered premium of 500*l.*, and are deposited in the concert-room of the Princess's theatre, in Oxford-street. The private view will take place on Monday, and subscribers and their friends will be admitted on the next and following days.

* See page 100, *ante*.

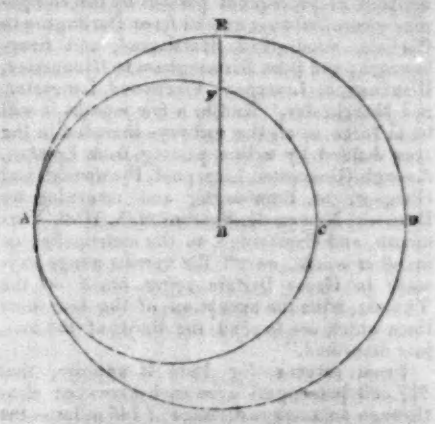
CONVERSION OF AREAS.

Sir,—As you have lately published many problems on the conversion of areas, I beg to forward you the inclosed. I will send you the solution of it in a few weeks if in the mean time you do not get a better one.

Yours very obediently,

June 23rd, 1846. R. S.

In the accompanying figure there are given the lines EF and CD (which meet when produced at right angles, at the centre B of the large circle) to find (geometrically), the diameter of a circle whose area shall be equal to the area of the space AEFDCA.



THE STAINED GLASS WINDOW IN ST. JAMES'S CHURCH, PICCADILLY.

The stained glass window in St. James's by Mr. Wailes is now fixed, and may be seen by all. In August last, we pointed out the mistake made by the committee in selecting a window of Gothic design and manner for an Italian Building.* In consequence of this, and the response our objections found in other quarters, considerable alterations were made by the artist, and no Gothic outlines appear in the window as now executed; the *vesica piscis* forms, and the foils are omitted, the borders altered, and the figures made to approximate to nature rather than in imitation of mediæval work. It has now a Byzantine rather than a Gothic character, and is less obtrusively objectionable than it would otherwise have been.

The window, as most persons know, is in two stories and six compartments. The principal compartment of the upper story contains the Transfiguration; that of the lower, the Crucifixion. In the other compartments are our Saviour praying while the disciples slept; the entombment; the resurrection, &c. Nearly 1,300*l.* were subscribed for the purpose, and as this sum is more than is required for the present window, the balance has been made the commencement of a fund, to defray the cost of filling all the other windows with stained glass likewise. However strongly we may have commented elsewhere on the proceedings of the committee, we cannot refuse them, and their honorary secretary in particular, Mr. Mayhew, praise for their zeal and good intentions.

By the way, those who visit the church should not fail to remark Gibbon's wonderful piece of carving, which adorns the chancel.

PROFESSOR DONALDSON'S CONVERSAZIONI.

On Tuesday and Wednesday evening last, Professor Donaldson received, at his house in Russell-square, the members of the Institute of Architects, and a body of distinguished visitors, and provided sumptuously for their entertainment mentally and bodily. The tables that were not filled with choice carvings groaned under the weight of a goodly supper, and antique vases and agate cups did more than divide attention with Roman punch.

An immense number of drawings were scattered about, some of them of great excellence: of which may be mentioned a collection of sketches and details from abroad, by Mr. Garling. Amongst other fine specimens of art, we particularly noticed a singularly good colossal head in bronze, of the Duke of Hamilton, by Mr. Campbell.

* See Vol. III., p. 297.

RAILWAY CLEARING-HOUSE.

In a pamphlet lately printed for private circulation, by Mr. K. Morison, a summary of the progress of this useful institution towards general adoption is thus given:—

"On the 2nd of January, 1842, the system of the Railway Clearing-house came into operation on the railways extending from London to Darlington in one direction, and from Manchester to Hull in another. It was adopted at subsequent periods by the companies whose railways extend from Darlington to Carlisle, Sunderland, Hartlepool, and Scarborough; and from Birmingham to Gloucester, Birkenhead, Liverpool, Fleetwood, Lancaster, and Manchester. And in a few months it will be in force in all the railways included in the area defined by a line passing from London, through Gloucester, Liverpool, Fleetwood, and Glasgow, to Edinburgh; and returning by Berwick, Newcastle, Scarborough, Hull, Yarmouth, and Cambridge, to the metropolis; or in other words, on all the narrow gauge railways in Great Britain lying north of the Thames, with the exception of the few short lines which are beyond the limits of the area just described."

From returns for 1845 it appears, that 517,888 passengers were each conveyed clear through an average distance of 146 miles,—the average length of the lines travelled over being forty-one miles; so that each passenger travelled over four railways, on an average, and must have passed three junctions or points of convergence. To accommodate these passengers, 59,765 railway carriages and 5,813 trucks, carrying private carriages, were sent through. There were also sent through, in the same year, 7,573 horse-boxes, 2,607 post-offices, and 180,606 goods waggons, besides waggons conveying minerals, of which no record is kept in the Clearing-house.

RAILWAY TERMINI IN THE METROPOLIS.

The Commissioners appointed to investigate the various projects for establishing railway termini within or in the vicinity of London, have reported against allowing the extension of lines towards the centre of the metropolis. They think that the advantage to be derived from such accommodation has been much exaggerated.

They express a decided opinion, that unless the existing main lines of streets are enlarged and improved, to a degree far beyond the intention, and, perhaps, beyond the means of any of the railway companies or projectors with whom they have had communication, the legislature would not be justified in sanctioning the extension of any railway into the neighbourhood of those streets.

"And here we would observe," they say, "that the enlargements and improvements which would be required are not merely the providing open spaces and areas immediately around the station for the reception of the carriages and other vehicles, which may arrive at or depart from it, but a widening, more or less extended, according to circumstances, of those channels through which traffic must approach the railway, and which, if overcrowded now, must become more so in proportion as the site of the station is found to suit the convenience of the travelling public."

At the conclusion of the report, which is a document of considerable length, the commissioners submit the following recommendations:—

1. That on the north side of the Thames, no railway now before Parliament or projected, be permitted to come within the limits described in our instructions.*

2. That if at any time hereafter, it should be deemed advisable to admit railways within those limits, this should be done in conformity with some uniform plan, carefully laid down under the authority of your Majesty's Government, and sanctioned by the wisdom of Parliament; and that under no circumstances should the thoroughfares of the metropolis, and the property and comfort of its inhabitants, be surrendered to separate schemes, brought forward at different times, and without reference to each other.

3. That on the south of the Thames, either the North Kent Railway be permitted to have its terminus in Union-street, and to join the terminus of the South-Western Railway, at Waterloo-bridge; or that the South-Eastern Railway be permitted to extend to Waterloo-bridge; accordingly as one or other of these lines may, upon a comparison of their general merits, receive the sanction of Parliament, and subject, in either case, to the conditions which we have pointed out in this report.

4. That the extension of the South-Western Railway to London-bridge be permitted, subject to the conditions pointed out in this report.

5. That a communication between the railways approaching London on the north and south sides of the river, and a connection between them and the docks being desirable, this should be effected by a railway encircling the metropolis, crossing the Thames at some point west of Vauxhall-bridge, and not coming within the limits of our inquiry on the north side of the river.

Canning.
Dalhousie.
John Johnson, Mayor.
J. C. Herries.
J. M. F. Smith.

* These are the Edgeware-road, from Oxford-street to the intersection of the New-road; the New-road and the City-road, to Finsbury-square; Bishopsgate-street; London-bridge; High-street, Borough; Blackman-street; the Borough-road; Lambeth-road; Vauxhall-road; Vauxhall-bridge; Vauxhall-bridge-road; Grosvenor-place, and Park-lane.

RIVER WATER—RAIN WATER.

HOW TO SET THE THAMES ON FIRE!

Sir,—The perusal of Mr. Wylson's very useful and interesting article on water in last week's Builder, induces me to offer you one or two little suggestions and remarks.

Why is it "quite impossible" for water companies to keep river water stagnant for a sufficient time to allow of its perfect purification from extraneous matter?

As it is, these companies practise the method of subsidence in reservoirs, though not for a sufficient length of time. Would not *additional reservoirs* enable them to take *additional time*,—and that too to *any* requisite extent? And as to agitation of surface, could not these additional reservoirs be also roofed over, to prevent the action of wind or any other agitating causes on them?

Ought a great capital, at all events, like London, to be deprived of the luxury—nay the requisite—of a perfectly clear and pure soft water, merely on the ground of additional expense? Why, I find, in the pages of The Builder itself, that at this very moment, it is proposed to expend no less a sum than 2,000,000*l.*, in the obtainment, otherwise, of this very comfort, namely, an abundant supply of clear soft water for the metropolis.

Old and stale as the standard joke about setting fire to the Thames is, Mr. Editor,—though still held good enough for repetition, on account of its supposed outrageous absurdity;—what will your select and intelligent readers say to the fact,—attested gravely in the following quotation from one of the curious works of that rich and rare old "Empyric," Van Helmont—which has just been called to my recollection by some kindred remarks in Mr. Wylson's article—not only that the thing is perfectly possible, but that it has actually been done, and may yet be done, again and again, for all that I know!

"We find by experience," says he "that when the water of the Thames is carried to the East-Indies; when the ship in which it is, comes under the Equator, where the power of the sun is most intense, the water becomes thick, tough, and clammy; but as soon as it is brought again to these parts, it becomes thin again, *and takes fire like brandy!*"

Let us hear no more jokes then about setting fire to the Thames; it is clearly no joke, but a sober, honest fact, or possibility at least, even on the most approved principles of modern chemistry,—for nothing is at all events more likely, than that the animal or other organic matter contained in the Thames water may, by decomposition, in barrels or other close vessels, so impregnate the water with hydrogenous or other inflammable gases, as to render it apparently combustible.

By the way, and seriously too, Van Helmont's observations, and those of the old chemists in general, are not to be sneezed at, notwithstanding the odd way in which the old boys sometimes come out with them, as the following curious anticipation of the modern discovery of the volatile oil or spirit of ammonia, in clear rain-water seems very likely to shew.

"If we take clear rain-water," says Van, "and put it into a well-closed glass, and set it for a long time in the sun, or to digest in warm water, it will putrify and precipitate, *and the water when distilled, will yield an oyl!*"

I am, Sir, &c.,
High Holborn, 6th July, 1846. J. E. D.

WANT OF A PROPER BUILDING FOR THE RECORDS.

The necessity for the erection of a fitting building for the reception of our public documents, is becoming more and more obvious. The risk to which they have long been exposed, and are now, is a disgrace to those in power, and *in the event of a conflagration*, would draw upon them no small amount of popular indignation.

The "Seventh Report of the Deputy Keeper of the Public Records," recently published, again draws attention to the fact, that our records (invaluable historical documents) are in greater jeopardy than any ordinary merchant would expose his account-books to.

The proposed appropriation of the Victoria Tower, when built, served to drive off the consideration of the question for a time. The tower, however, it was found, would not be large enough for the purpose, and the roof of the whole building is now talked about as the intended record office. A more unsuitable place can scarcely be conceived: we trust the proposal will be abandoned, and a proper fire-proof repository for these most valuable monuments be speedily built.

INSTITUTION OF CIVIL ENGINEERS.

ARTESIAN WELLS.

June 30th, the president in the chair. A paper was read describing the effect of the deep wells of the metropolis on the supply of water in the London basin, by Mr. Frederick Braithwaite, member. The object of this paper was to direct attention to the fact that the numerous deep wells sunk in and near the metropolis were gradually draining the chalk basin, and that every additional well driven in search of water had the effect of diminishing the water level in all the wells already existing. As a proof of this fact, it was stated that in a well at Combe's brewery, sunk twenty years ago, the water rose at that time to within 70 feet of the surface, but that it now only rose to within 120 feet, shewing a diminution of 50 feet. From this and other instances it was argued that the supply of water was rapidly decreasing, and this was attributed as well to the improved under drainage of the lands which received the falling rain, as to the increased demand upon the springs. The deep springs, therefore, were shewn not to be inexhaustible, that obtaining water from them was attended with considerable expense and uncertainty; it was argued thence that it was necessary to consider very carefully any attempts for obtaining a considerable supply of water by means of wells, from the chalk of the London basin. A remarkable fact also shewn in one of the tables, was that on the 5th of April, 1832, there occurred a sudden depression of eighteen feet of the springs, which lasted for half an hour, at the end of which time thirteen feet of the eighteen were regained. The paper contained many interesting facts as to the general amount of the supply of water from the different strata, and was illustrated by a series of plans, the first of which was a map on a large scale, taking St. Paul's as the centre, describing around it a series of circles with a radius of four miles; the external circle was divided into the thirty-two points of the compass, from which lines were drawn to the centre (St. Paul's). Upon these lines a series of sections were laid down, exhibiting the various strata down to the chalk, as shewn by the deep wells sunk in the districts between those lines, as far as the information could be gathered from those employed in sinking and boring them. These sections exhibited a remarkable contour of the chalk basin, and furnished fertile subject for speculative geology, as well as very valuable information as to

the probable production of water from the various strata.

In the discussion which ensued, the dean of Westminster treated with his usual clearness of scientific research the difficult problem of the origin of subterraneous lakes or sheets of water, and the causes of the spontaneous ascent of the water towards the surface of the earth. He described the influence of the alternating impermeable beds of clay in retaining within the more porous strata the water received at their outcrop, whence became evident the cause of the rising of water in the Artesian wells, sunk through the impermeable London clay down to the porous chalk basin into which the water had filtered through the fissures and veins of flints, from the extensive denuded surface of chalk around the London district.

After treating this subject at considerable length, the rev. doctor alluded succinctly to the proposed speculation for supplying the metropolis with water from the river Colne, and described the labours of the Rev. Mr. Clutterbuck, who, in papers read before the Institution of Civil Engineers, had demonstrated, by a long continued series of measurements of the water in the chalk hills of Hertfordshire, that all the water taken from that neighbourhood would have been abstracted from the supplies of the river Colne, and would have trenched upon the water rights of the mill owners; he alluded also to the rain-gauge experiments of Mr. John Dickinson, who during many years had found by arithmetical evidence, that the quantity of summer water in the Colne varied with the quantity of rain in the preceding winter, and he regulated his contracts for paper to be manufactured in the summer and autumn, by the quantity of water shewn in his winter rain-gauge; these observations have been corroborated by foreign experiments. He then treated briefly the general subject of Artesian-wells, the increased temperature of the water in the exact ratio of the depth, the sympathy between the depression of water in the various wells throughout an extensive chalk district, proving the identity of origin of the supplies. As the number of deep wells was therefore constantly increasing, the extra pumping upon one of them necessarily affected all within a certain distance around it. Mr. Clutterbuck's observations confirmed this. He had further observed, that the surface line of subterranean sheets of water was not horizontal, but inclined at a considerable rate, in consequence of the friction of the strata through which the water descended. The doctor concluded by drawing attention to the remarkable contour of the surface of the chalk exhibited in the sections, upon which he proposed on a future occasion to offer some observations.

The substance of a description of the large cast-iron lock gates recently constructed by Messrs. Rennie for the new docks at Sevastopol, in Turkey, and of a new mode of analyzing iron by M. Margueritte, were briefly mentioned. The president congratulated the members on the success of the past session, and after the ballot, at which Messrs. C. E. Cawley, E. L. Williams, and G. Giles, were elected as members, and F. Warren and G. Selby as associates, the meeting was adjourned until the second Tuesday in January, 1847.

AS TO GIVING NOTICE TO DISTRICT SURVEYORS.

Mr. Moxhay, of the Hall of Commerce, in Threadneedle-street, appeared at Guildhall on Saturday last, upon the complaint of Mr. Montague, the surveyor of the north district of the city, for unlawfully taking down and rebuilding a piece of wall in Inner Cushion-court, Old Broad-street, without giving previous notice to the complainant, whereby he had incurred a forfeiture of thrice the amount of the surveyor's fees, and a fine not exceeding 20*l*. We take the following particulars from *The Times*.

Mr. Montague said he made this complaint, not to recover his fees, which in this case he renounced, but to shew that the New Building Act must be attended to, and that the consequence of disregarding it might be the incurring of serious penalties. He should press for the infliction of a fine, by way of warning to others. This wall was declared to be dangerous, was shored up, and Mr. Moxhay was required to repair it. It had been repaired, and no notice had been given to him. Now the law required him to sign a certificate that the repairs had been made properly, according to the Act, but how was he to do this when he knew nothing about it till the work was covered in and finished? By the 13th section, notice was to be delivered at his office two days before any wall should be altered. In this case, his fee for attending to survey, &c., was 3*l*. 3*s*.

Mr. Moxhay asked him how he could pretend to be ignorant of the matter, when he had himself caused an official notice from the Court of Aldermen to be served on him, requiring him to repair the wall within fourteen days.

Mr. Montague said he had nothing to do with the notice produced. It emanated not from him, but the office of the city solicitor.

Mr. Moxhay proceeded to interrogate Mr. Montague with some heat on this point.

Mr. Montague explained, that he received a letter from Mr. Brown of Cushion-court, calling his attention to the dangerous state of this wall, which was rotten, loose, and bulging. He went and looked at it, and reported to the official referees that he considered it to be highly dangerous. The referees gave notice to the Court of Aldermen, who directed the city surveyor to immediately, by hoarding in and shoring up, secure the wall; and the city solicitor was instructed to give notice to the owner to begin to repair the same within 14 days. He knew, therefore, that the wall required to be repaired, and that somebody would have notice to repair, but he did not know when the party would begin the repair, that he might attend and see what was being done. The party who repaired the wall was required to give him two days' notice before he began, in order that he might be present at the proper time.

Mr. Moxhay said he did not consider that the wall belonged to him, but it had been decided that it did. It had, to the extent of three yards, been loosened, by driving wedges against it, in the course of some repairs going forward at the premises of Mr. Brown, who made the original complaint of the unsoundness of the wall. He maintained that, in fact, there could be no want of knowledge that the wall was to be immediately repaired, as Mr. Montague himself helped to put the law in motion; and, secondly, that as the city authorities ordered him to make the repair, it dispensed with the necessity on his part of giving notice of his intention to repair. The one notice must override the other.

The magistrates called in the city solicitor to advise on the question, who was of opinion the builder or owner was not relieved from the obligation to give notice to the district surveyor of the precise day of commencing the repair, and that the penalty had been incurred; but Mr. Moxhay had not omitted to give the notice in the defiance of the law or to evade any lawful fees, and this should be considered in fixing the amount of the fine. They all knew how much Mr. Moxhay had done to adorn the city.

Mr. Alderman Moon and Sir C. Marshall concurred in the compliment paid to Mr. Moxhay, and mitigated the fine to 40*s*. At the same time they complimented the surveyor on his disinterestedness in renouncing the treble fee of nine guineas.

Mr. Montague surrendered the penalty of 40*s*. to the poor-box.

Completion of the Scott Monument at Edinburgh.—The statue of Sir Walter Scott will shortly be in its place, and on the 15th of August the anniversary of the birth-day of Sir Walter, the statue will be unveiled and the monument completed with great ceremony, in the presence of the members of a procession of the Grand Lodge of Scotish Free Masons, and a holiday crowd of the citizens, who are expected to carry through the inauguration with great éclât.

Cantlop.—A very fine quarry of red granite has been discovered on the estate of Mr. John Lawrence, of Cantlop, near this town, which is likely to prove very advantageous for building purposes, the quality of the stone being remarkably good and firm.—*Shropshire Conservative.*

RESTORATION OF COLOGNE CATHEDRAL.

The following is the eleventh quarterly report of the architect, Mr. Zwirner, from the beginning of January to the end of March, 1846. Translated from the *Kölner Domblatt*, No. 16, in the *Ecclesiologist*:—

"As is always the case during the winter, the works for the above period have been chiefly confined to preparing the stones to be employed in those parts of the building which will be erected during the ensuing summer. Thus on his Majesty's account, the materials provided for the south transept, and those also especially which are intended for carrying up the nave to a greater height, and for the columns and gallery of the triforium, have been now got ready, while on account of the 'Central Restoration Society' and the 'Bavarian Society,' similar preparations have been made towards the works on the north transept and nave aisle. In this latter part the building itself was resumed early in March, and the two half-blind windows with the pillars (or buttresses?) belonging to them, occupying the north-west angle formed by the nave and transept, have been raised to the height of about ten feet.

With a view to the erection of the north tower, it was essential that the foundations of the southern central pier (*mittelpfeiler*) should be properly laid and adjusted. Accordingly I had the pavement taken up, and the rubbish, which had been filled in, cleared away, in the full persuasion that the foundations to so principal a member of the edifice must have been laid by the old builders at the same time with the other foundations of the tower, according to what the first principles of the art would require. Upon making the excavations, however, there was first discovered a vault which had been filled in and walled up with brick-work, upon the floor of which great quantities of human bones were lying about without coffins. Beneath this floor, lying some ten feet below the surface, I expected to find the old foundations of the tower; we had however to dig yet deeper, and at a depth of thirteen feet first came upon a mass of masonry composed of large blocks of basalt. But this, upon closer examination, turned out to be no more than an old irregular and limited fragment of wall, having no relation to the general plan of the tower foundations, and, besides this, reposing on nothing but some building materials loosely filled in, without there being any appearance of masonry to be found further.

Here, then, we have the foundations of one principal support of the tower entirely wanting, and it will therefore have to be laid new from the very bottom. The requisite excavations for this purpose have been made to the depth of about thirty feet. Upon this occasion it appeared that the foundation to the western supports of this north tower, instead of being connected with the other foundations of the tower, is, in like manner, isolated, being laid in detached boarded shafts, of which the impressions left by the boards upon the external mortar are yet visible. The same way of building was also observed in the completion of the transept foundations, upon which I made what remarks were necessary in the supplement appended to my first report, entitled, 'The building of Cologne cathedral, past and present,' (see the *Domblatt*, No. 5, first year, 1842).

The worst of this occurrence is the great delay and unforeseen expense which must necessarily be occasioned by the construction of an entirely new foundation. Whether the foundation for the central pier (*mittelpfeiler*)* of the tower exists or not, it is as yet quite impossible to decide, as the ground is at present occupied with the materials for laying the foundation of that already mentioned."

In conclusion, after some accounts which are omitted here, the architect regretted that the keeping of several separate accounts and the division of the expenses among different portions of the building, tended much to complicate the management; and that the simultaneous employment of the workmen on five different parts of the works added much to the trouble and expense of the undertaking."

* The very extensive use of the word *pfeiler* (pillar, pier, column, support, buttress), in Germany, creates some little ambiguity in these reports. It is difficult to make the account fully intelligible without the assistance of a good plan, or an accurate knowledge of the building itself.—Translator.

On this same interesting subject, a correspondent of the *Athaneum*, who dates his letter the 18th of last month, writes as follows:—

"In two years, as Herr Zwirner *showed* us, the nave, aisles, and transept of the cathedral may be thrown open—not, in truth, to the entire height; but complete to a level above the clerestory windows. The vaulting of the side-aisles will be then completed; and a temporary roof will be easily placed over the central portion,—leaving, within, the upper part of the walls, vaults, &c., to be raised:—without, the flying buttresses, pinnacles, and other garnitures are a more serious business. The raising of the transept walls to their present important height, Herr Zwirner assured us, was a heavier two years' task than what remains to be done in realization of a scheme so attractive to the fancy. Moreover, the casual visitor is little aware of the vast collection of ornamental sculptures, ready to be placed, which the workshops contain. The canopies round the retreating portal of the northern transept are already fixed; the capitals of the pillars of the clerestory gallery are waiting by the score. Let not my statement mislead any one into imagining a case of *manufacture*. The old capricious variety of fancies in ornament, has been as religiously carried out as every other intimation of the nameless architect's intention. The small grotesque figures at the angles of the canopies aforesaid (which are merely shelters for statues of saints, angels, &c.,) are as minutely finished and whimsically diversified, as if they could be seen without the aid of an opera-glass when they shall be raised to their destined position. The foliage, again, of the capitals has the sharpness of the best period of cutting. No two devices are alike. The stone used for these more delicate portions is of peculiarly fine and close quality—from Rochefort. Nothing seems slighted or overlooked; and the workmen, of course, become more skilful as they proceed, and fuller of spirit and invention. A growing confidence that all this labour is not to be in vain as regards the grand result, probably animates those who have contributed to a scheme so magnificent, but for a long time deemed so visionary. Windows are beginning to drop in. The King of Bavaria's donation of *six* for one of the side aisles will be ready in 1848; and then, it is said, the spell is to be broken—the wall thrown down betwixt nave and choir, with splendid festive ceremonies. This will give an immense impetus to popular feeling.

VENICE.

"All the time I was at Venice," says Mrs. Jameson, in her last pleasant 'Essay on Art,' "I was in a rage with Canaletti. I could not come upon a palace, or a church, or a corner of a canal which I had not seen in one or other of his pictures. At every moment I was reminded of him. But how has he painted Venice? Just as we have the face of a beloved friend re-produced by the daguerréotype, or by some bad conscientious painter—some fellow who gives us eyes, nose, and mouth by measure of compass, and leaves out all sentiment, all countenance; we cannot deny the identity, and we cannot endure it. Where in Canaletti are the glowing evening skies, the transparent gleaming waters, the bright green of the vine-shadowed *Traghetto*, the freshness and the glory, the dreamy, aerial, fantastic splendour of this city of the sea? Look at one of his pictures—all is real, opaque, solid, stony, formal—even his skies and water—and is *that* Venice? 'But,' says my friend, 'if you would have Venice, seek it in Turner's pictures!' True, I may seek it, but shall I find it? Venice is like a dream—but this dream upon the canvas, do you call *this* Venice? The exquisite precision of form, the wondrous beauty of detail, the clear, delicate lines of the flying perspective—so sharp and defined in the midst of a flood of brightness—where are they? Canaletti gives us the forms without the colour or light. Turner, the colour and light without the forms. But if you would take into your soul the very soul and inward life and spirit of Venice—breathe the same air—go to Titian; there is more of Venice in his 'Carnaro Family,' or his 'Pesaro Madonna,' than in all the Canalettis in the corridor at Windsor.*

Beautiful they are, I must needs say it; but when I think of enchanting Venice, the most beautiful are to me like prose translations of poetry—petrifactions, materialities: 'We start, for life is wanting there!' I know not how it is, but certainly things that would elsewhere displease, delight us at Venice. It has been said, for instance, 'put down the church of St. Mark any where but in the Piazza, it is barbarous:' here, where east and west have met to blend together, it is glorious."

* By the way, no one knows Canaletti's art who has not seen this aforesaid corridor. The collection is matchless.—Ed.

LORD EBRINGTON ON THE ARRANGEMENT AND VENTILATION OF HOUSES.

Lord Ebrington's lecture on the unhealthiness of towns, delivered in the Mechanics' Institution, at Plymouth, has been published by the Health of Towns Association.*

We take from it the following remark, and recommend the whole for wide distribution.

"With regard to ventilation in its largest sense, that of towns; by an improved arrangement of the streets, the expense I acknowledge would be formidable; but when it is remembered how many other useful purposes are effected by making streets straight instead of winding, wide instead of narrow, in continuous lines and free overhead, instead of discontinuous or connected only by archways, some expense would not be—indeed, we see daily proof that it is not—thought ill bestowed, in making our thoroughfares in large towns not only airier, but also drier, lighter, shorter, and more commodious for traffic, more cheerful and more handsome. When it is considered that the breath of human beings alone, exclusive of animals, in the metropolis, discharges into the air sixty tons of carbonic acid and sixty tons of water every day, it will be easier to appreciate the importance to health of allowing the freest access possible, not only to the light of the sun, but also to the purifying winds of heaven. Dr. Duncan, describing the well-like courts and alleys of Liverpool, speaks with enthusiasm of the delight with which he hails a hurricane or thunder-storm. No ordinary breeze has any effect in renovating the atmosphere of spots so completely hemmed in. Indeed, so strongly is the evil of the inevitable deterioration of the air of our enormous metropolis felt, that it is seriously in contemplation to establish villages for the residence of operatives in the neighbourhood of London, from which they would be daily conveyed to their work and back by the railways. The evidence of Captain Vetch as to the best mode of arrangement for the increments of towns is very interesting; as also what he says, and Mr. Butler Williams, on the importance of having accurate surveys made of every town, accessible to all who want them for the purposes of drainage, gas and water supply, &c. He shows the costly blunders and difficulties which result from the absence of such information. It is sufficient to say that additional streets ought to be made as nearly as possible parallel to the exterior lines of the town, with broad continuous communications across them nearly at right angles, and leading straight into the principal thoroughfares.

Now, with respect to the houses themselves, it is essential that they should never be placed back to back, nor even too close to allow of a fairly sized back yard or garden to each, accessible to light and air.

I will only mention one plan which I have adopted myself in building cottages on the estate which I have the management of, namely, the introduction of some air from the outside, through a pipe taken into an iron box at the back of the kitchen fire, whence it is conducted by another tube carried up the corner of the chimney into the bedroom above. In this manner a constant supply of warmed fresh air is furnished to the sleeping-room through a screen of wire gauze, which diffuses it without draught. The extra cost is so trifling, that it is not worth talking about. As a general principle it should be remembered that cold air is heavier than hot, and that consequently the breath and steam of the body, as well as the smoke and vapour from lamps and candles, has a tendency to ascend; the great object, therefore, is to have openings high up in a room. To prove this, Dr. Guy mentions a workshop in two stories without any opening; in the upper, ten out of seventeen, in the lower only one out of fifteen men working there, were affected by disease of the chest. Dr. Arnott, on the other hand, mentions a large sort of barrack at Glasgow, in which all the workmen of a factory lodged, from which fever was never absent. It was rendered quite healthy by carrying a tube from the ceiling of each room into the large factory chimney, the powerful draught of which secured a constant change of air for the inmates.

* C. Knight, London.

New Books.

An Exposition of the Danger of the Present Mode of Railway Construction, with Suggestions for its Improvement. By C. H. Greenhow. Weale.

The points urged in this pamphlet are, that a more perfect adjustment between the wheel and rail than at present exists, is necessary: that the only shape which can really give security under all circumstances, is the convex or round rail and concave tire, assisted by an inwardly inclined spoke, making the wheel in fact a cone, resting with its extreme edge on the rail; and that the tire, without the point on the surface of the rail perpendicular to its centre, ought to be so formed as to secure a perfect accordance between the wheels and the running surface of the rails, should either of them sink below the level of the other, or should the gauge separate so as to increase the distance between them.

A suggestion made by the writer to the effect, that all the carriages running on a railway should be of proportioned dimensions, seems worth consideration.

Gothic Ornaments drawn from existing Authorities. By J. K. Colling, Architect; Bell, Fleet-street. 1846. No. 1.

This promises to be a useful work. The first number contains four plates in lithography, including capitals from the choir of Ely Cathedral, quarter full size; wooden poppy-heads from Paston church, Norfolk, half full size; portions of rood-screen from Ludham Church, Norfolk, portion of mullion of screen, crocket from the canopy of doorway, examples of decorations enriched by gold and colour; and wooden spandrils from North Walsham Church, and Trunch Church, Norfolk, half full size.

We withhold an opinion until the work is further advanced. The date should be given in all cases if possible.

Correspondence.

THE MADNESS OF BUILDERS.

Sir,—On last Friday, at the Sewers Office for the Westminster Division, there were let about 775 lineal feet of 18-inch barrel drain to be built in the line of the Old Ranelagh Sewer at Bayswater. I have taken the liberty of sending you a list of the tenderers and their amounts as a curiosity. I am, Sir, &c.,

July 7, 1846. Candid.

Johnson	£398	0	0
Mathison and Frost	298	17	0
Starkey	196	10	0
Yeomens	170	0	0
Austin	161	10	0

Austin's tender accepted.

The City of Mexico.—In the principal streets the houses are all constructed according to the strictest architectural rules. The foundations of the city were laid, and the first buildings were erected by Cortes, who did every thing well which he attempted,—from building a house or writing a couplet, to conquering an empire. Many of the finest buildings in Mexico are still owned by his descendants. The public square is said to be unsurpassed by any in the world; it contains some twelve or fifteen acres paved with stone. The cathedral covers one entire side, the palace another; the western side is occupied by a row of very high and substantial houses, the second stories of which project into the street the width of the pavement; the lower stories are occupied by the principal retail merchants of the city. The most of these houses were built by Cortes, who, with his characteristic sagacity and an avarice which equally characterised him in the latter part of his life, selected the best portion of the city for himself.—*Thompson's Recollections.*

Miscellanea.

IBRAHIM PACHA'S VISIT TO THE MANUFACTORIES.—It is an interesting reflection connected with Ibrahim Pacha's visit to the manufactories of England, says a writer in the "Literary Gazette," that, some three thousand years ago, many of these arts flourished in an eminent degree in the kingdom to which he is heir-apparent. In the manufacture of glass, for instance, which appears particularly to have excited his astonishment at Birmingham, the ancient Egyptians had attained a degree of perfection which, in some branches, has scarcely been equalled by the artificers of modern times.

When with just pride Britannia doth display
Before the wondering heir of Pharaoh's throne
Triumphs of art to other lands unknown,
Oh, may she not forget, in this her day,
That there was once, in years long passed away,
A time when all these arts so proudly shewn
To the Egyptian, were his nation's own!
And she who rules with such triumphant sway,
The realms of skill and science—where was then
Her glory? In the lowest form of man
Her children naked on the mountains ran,
Or shared the wolf and the hyena's den.
And if her heart beat high with the review,
May she be humble and be thankful too!

R. F.

INTERIOR DECORATIONS.—We learn that Sir Lionel Goldsmid is decorating in encaustic one of the rooms of his mansion, upon which he means to expend a thousand pounds. The work has been undertaken for him by—an eminent upholsterer! In the name of common sense, we ask, why will not such gentlemen employ artists, instead of persons who deface where they pretend to decorate? Cases of this kind are now of frequent occurrence; application is made to Mr. B. or Mr. C., who readily undertakes "the job,"—and how does he accomplish it? By cutting pages out of a few old or modern books, sticking them together, making up a pretty picture—and there is the design! Care to harmony he has none; uniformity of style is a matter of no moment; but it is essential to pick out a variety of pretty bits, and find an artist who will not spoil their effect by giving too much of his own work. We shall consider this matter more in detail ere long. It is grievous to know that every day large sums of money are paid to "decorators," who might as well be apothecaries for any knowledge of art they possess.—*Art-Union Journal.*

HAYDON'S ESTIMATE OF HIS PREDECESSORS.—Never were four men so essentially different as West, Fuseli, Flaxman, and Stothard. Fuseli was undoubtedly the mind of the largest range;—West was an eminent *macchinista* of the second rank;—Flaxman and Stothard were purer designers than either. Barry and Reynolds were before my time; but Johnson said, in Barry's Adelphi "there was a grasp of mind you found no where else;" which was true. Though Fuzeli had more imagination and conception than Reynolds—though West put things together quicker than either—though Flaxman and Stothard did what Reynolds could not do, and Hogarth invented a style never thought of before in the world, yet as a great and practical artist, in which all the others were greatly defective, producing occasional fancy pictures of great beauty, and occasional desperate struggles in high art, with great faults, Reynolds is unquestionably the greatest artist of the British school, and the greatest artist in Europe since Rembrandt and Velasquez.

ENTICING AWAY WORKMEN.—Some glass manufacturers at Sunderland recently brought an action against the proprietors of the British Glass Works, Newcastle-on-Tyne, for enticing away four of their workmen, and recovered 657*l.* 6s. 8d. damages.

GREAT WESTERN RAILWAY.—From returns made to the Board of Trade, we learn that the working stock of the Great Western Railway includes 127 engines, 232 passenger carriages, and 919 luggage vans, trucks, and carriages.

NAVAL ARCHITECTURE.—The Admiralty has issued instructions, under an order in council, for the revival of the school of naval architecture in the Portsmouth dockyard.

THE ROYAL ACADEMY has sent a donation of 50*l.* towards the fund for the relief of the widow and family of the late Mr. Haydon.

NOTICES OF CONTRACTS.

[We are compelled, by the interference of the Stamp Office, to omit the names of the parties to whom tenders, &c. are to be addressed. For the convenience of our readers, however, they are entered in a book, and may be seen on application at the office of "The Builder," 2, York-street, Covent Garden.]

For the execution of the remaining portion of the Cumnock extension of the Glasgow, Paisley, Kilmarnock, and Ayr Railway.

For the execution of the Junction between the Glasgow, Paisley, Kilmarnock, and Ayr Railway, and the Kilmarnock and Troon line.

For the construction of the extension line of the Chester and Birkenhead Railway, from Grange-lane to Bridge-end, in the township of Birkenhead.

For repairing and making good the ceilings of the Sculcoates Union Workhouse.

For whitewashing the walls of the Sculcoates Union Workhouse.

For taking on a repairing lease, for 21 years, six houses in Bunhill-row.

For taking on a building lease for 61 years, a piece of vacant ground behind Bunhill-row.

For a supply of cast-iron pipes for the Liverpool and Harrington Water-Works (promptly).

For the disposal of a powerful fire-engine, with all necessary apparatus.

For the supply of broken Guernsey granite for the New Cross Turnpike Road Trustees.

For a supply of flints for the New Cross Turnpike Road Trustees.

For building about 2,200 lineal feet of quay wall at Glasgow.

For fitting up the church of Wimborne Minster, Dorset, with gas for evening service.

For the disposal to a machinist, engineer, or smith, of a jobbing trade of 20 years' standing, with forges, tools, lathes, vices, &c.

For widening and modifying the bridge at Ianishannon, on the road from Cork to Skibereen.

For the erection of a district military prison at Cork.

For the mason's and bricklayer's work required in the erection and completion of a new manufactory at Sheffield.

For the plasterers' and slaters' work required in the completion of a new manufactory at Sheffield.

For the joiner's and carpenter's work required in the erection and completion of a new manufactory at Sheffield.

For the plumber's and glazier's work required in the erection and completion of a new manufactory at Sheffield.

For the painter's work required in the completion of a new manufactory at Sheffield.

For the disposal of a long-established business in the iron-founding and ironmongery line.

For the erection of a farmhouse and outbuildings near Newmarket.

For the cast-iron bridges required for the Edinburgh and Northern Railway.

For the letting of a valuable stone quarry, in the parish of West Monkton, near Taunton.

For the execution of the first contract for works on the branch of the Edinburgh and Northern Railway, from near Thornton, by Lochgelly, to Dunfermline.

For the execution of the second contract for works on the branch of the Edinburgh and Northern Railway, from near Thornton to Dunfermline.

For the execution of the third contract for works to be done on the branch of the Edinburgh and Northern Line, from near Thornton to Dunfermline.

For the execution of the first part of the Newport extension of the Edinburgh and Northern Railway, from the town of Cupar to the village of Leuchars, including the works from Cupar to near Dron, a length of about 4 miles.

For the erection of the second part of the Newport Extension of the Edinburgh and Northern Railway, from Cupar to Leuchars, including the works from Dron to Leuchars, a length of about 3½ miles.

For the execution of all the works necessary for the erection of the high level bridge over the Tyne, on the Newcastle and Berwick Railway (extension of time).

For the execution of the Viaduct through Gateshead, on the line of the Newcastle and Berwick Railway (extension of time).

For the execution of the Viaduct through Newcastle, on the line of the Newcastle and Berwick Railway (extension of time).

For building and completing a new Mansion House in Banffshire, Scotland.

For letting a Slate Quarry at Appin, Scotland.

For the execution of an improvement in Lydgate-lane, Sheffield.

For the erection of additional buildings at the Salop Lunatic Asylum.

For the widening of Topsham bridge.

For the improvement of the approaches to Topsham bridge.

For the excavator's work required for the intended Industrial Training Schools for Pauper Children of the township of Leeds (promptly).

For the disposal of a wholesale and retail ironmongery business in Bradford.

For the erection of a barn and hovel at Newbottle, near Houghton-le-Spring, in the county of Durham.

For the erection of a barn, stable, and hovel at Over-the-hill, near Houghton-le-Spring, in the county of Durham.

For the disposal of a builder's stock in trade at Llangattock, Crickhowell.

For the erection of a farmhouse at Maesyronen, county of Radnor.

For the erection of a new bridge over the River Worm (promptly).

For the making of a new cut to alter the course of the river Worm (promptly).

For the disposal of the Earl of Ducie's Iron Works at Uley, near Dursley, Gloucestershire.

For plans and estimates for the restoration and repewing of St. Lawrence's Church, Reading, by an architect resident in Reading.

For building sewers in Bell-yard, in the City of London.

For building sewers in Gracechurch-street, in the City of London.

For building sewers in Laurence Pountney-lane and hill, and other places contiguous in the City of London.

For a supply of cast-steel files and rasps for the East-India Company.

For the disposal of a business for plumbers, glaziers, and painters, near the City of London, and established for twenty-six years.

For providing and fitting glass tops with the best tin frames to about 200 public lamps in St. James's, Clerkenwell.

For the supply of 9,000 running feet of flat Aberdeen Carlinose or other granite curbing 12 by 6 inches properly squared, and not less than 3 feet 6 inches in length, for the parish of St. John, Hackney.

For paving certain of the footpaths in the parish of St. John, Hackney, with York paving of the best quality.

COMPETITION.

A premium of 25*l.* will be awarded by the trustees of the Jephson Gardens, at Leamington, for the best set of plans, accompanied with a specification for laying them out. A premium of 10*l.* will be awarded for the second best plan.

APPROACHING SALES OF WOOD, &c.

BY AUCTION.

At Greenock: 105 logs and 12 Crotch pieces Honduras mahogany.

At Whelpleyhill, between Chesham and Berkhamstead; 544 beech timber trees, with tops; 933 beech poles, and some clean ash.

At Bristol: 90 pieces of English oak timber; also a quantity of larch railway sleepers, rails, and stakes.

At Whiteparish, Wilts: 307 large oak timber trees, 215 oak fitterns, 113 ash poles, 26 ash, and 16 beech trees, &c.

At Little Cornard, near Sudbury: 1,000 oak timber trees.

At Davis's Mart, Mark-lane: the whole of the plant and materials of the Experimental Railway on Wimbledon Common.

At Framsden, near Helmingham: a large quantity of oak top ends, gate posts, planks, &c.

At Inverary: a large quantity of growing and cut timber, chiefly larch and Scots fir of great size.

At Whittle Lodge, Essex: a large assortment of building materials. Day of sale altered.

At Dare's timber yard, Bermondsey, New-road, near the Bricklayer's Arms: the whole stock of planks, battens, deals, timber, mahogany, &c. &c.

At Southampton: 1,200 seasoned Memel and Petersburgh deals and battens.

At Southampton: a cargo of yellow and red pine, elm, deals, lathwood, &c., in suitable lots.

At the Custom-house Dock, Dublin: 100,000 feet Honduras mahogany, 28 to 40 inches in depth.

At the Workington Iron Works, Cumberland: 200 tons bar iron, in suitable lots for engineers, iron merchants, railway contractors, &c. Also upwards of 300 tons of pig iron. Time of sale now fixed.

At Llangattock, Crickhowell: a builder's stock in trade, &c.

At Knotting, near Higham Ferrers: about 1,300 oak timber-trees, with tops and ash spires.

At the Buck Inn: Annan New Tile Works, with three fields of excellent clay.

At King-street, Hammersmith: the good-will of an old established business for plumbers, painters, glaziers, house-decorators, and others, with stock in trade, shop fixtures, &c.

TO CORRESPONDENTS.

"*Cedar Wood.*"—The communication on this subject is postponed, as the signature appears to be accidentally omitted.

"*W. F.*"—Bloxam's "Principles of Ecclesiastical Architecture" (8th Edition), gives good general information. (Bogue, Fleet-street).

"*G. G. F.*"—Caen stone may be used externally without fear, if properly selected. An English stone is used externally for the Houses of Parliament, called Anstone stone.

"*Citizen of the World.*"—The etching of Sir J. Brunel appeared to us to promise a good likeness, but we cannot speak positively.

"*J. M.* (York-street)."—The letter did not reach us in time. What are the particulars?

"*W. P.*"—Write for a penny pamphlet on the subject published by Churchill, Princes-street, Soho, London. Consult any elementary work on chemistry.

"*S. B. P.*" declined with thanks.

"*J.*" (Newbury).—The price of each part is 3s.

"*J. C.*"—Thanks.

Received.—"George Lock," "G. H." "Old England's Worthies," Part VI. (C. Knight.) "Pictorial Gallery of Arts," Part XVIII., Architecture. (C. Knight.)

ERRATUM.—Page 320, for "the small portal of William Horne," read "small portal of Wilton House."

ADVERTISEMENTS.

TO ARCHITECTS, BUILDERS, &c.

GAS LAMPS, GAS BRACKETS, GAS PILLARS, BURNERS, &c. &c. In calling the attention of architects, builders, &c., to their assortment of Gas Furniture in general, C. DEBAUFER and SON respectfully announce they continue to fit up premises of every description on the most approved and newest system of gas fitting. An experience of forty years justifies us in making the above assertion.—P.S. Country orders attended to with dispatch.

10 and 11, Creed-lane, St. Paul's.

MORTGAGE AND ANNUITY OFFICE, No. 125, CHANCERY-LANE.

PERSONS requiring LOANS by way of MORTGAGE or otherwise upon any available security, may at all times procure in advance to the extent of from 100*l.* to 150,000*l.*, or so much as the property will bear, by applying to Mr. BRAY, surveyor, at the offices as above, where a registry for the sale of estates, houses, land, life interests, and reversions, is kept for inspection.

N.B. To expedite the procuration, personal application at the office would in all cases be better, the party bringing with them the abstract of title, plans, &c.

On this same interesting subject, a correspondent of the *Athæneum*, who dates his letter the 18th of last month, writes as follows:—

"In two years, as Herr Zwirner *showed* us, the nave, aisles, and transept of the cathedral may be thrown open—not, in truth, to the entire height; but complete to a level above the clerestory windows. The vaulting of the side-aisles will be then completed; and a temporary roof will be easily placed over the central portion,—leaving, within, the upper part of the walls, vaults, &c., to be raised:—without, the flying buttresses, pinnacles, and other garnitures are a more serious business. The raising of the transept walls to their present important height, Herr Zwirner assured us, was a heavier two years' task than what remains to be done in realization of a scheme so attractive to the fancy. Moreover, the casual visitor is little aware of the vast collection of ornamental sculptures, ready to be placed, which the workshops contain. The canopies round the retreating portal of the northern transept are already fixed; the capitals of the pillars of the clerestory gallery are waiting by the score. Let not my statement mislead any one into imagining a case of *manufacture*. The old capricious variety of fancies in ornament, has been as religiously carried out as every other intimation of the nameless architect's intention. The small grotesque figures at the angles of the canopies aforesaid (which are merely shelters for statues of saints, angels, &c.,) are as minutely finished and whimsically diversified, as if they could be seen without the aid of an opera-glass when they shall be raised to their destined position. The foliage, again, of the capitals has the sharpness of the best period of cutting. No two devices are alike. The stone used for these more delicate portions is of peculiarly fine and close quality—from Rochefort. Nothing seems slighted or overlooked; and the workmen, of course, become more skilful as they proceed, and fuller of spirit and invention. A growing confidence that all this labour is not to be in vain as regards the grand result, probably animates those who have contributed to a scheme so magnificent, but for a long time deemed so visionary. Windows are beginning to drop in. The King of Bavaria's donation of *six* for one of the side aisles will be ready in 1848; and then, it is said, the spell is to be broken—the wall thrown down betwixt nave and choir, with splendid festive ceremonies. This will give an immense impetus to popular feeling.

VENICE.

"All the time I was at Venice," says Mrs. Jameson, in her last pleasant 'Essay on Art,' "I was in a rage with Canaletti. I could not come upon a palace, or a church, or a corner of a canal which I had not seen in one or other of his pictures. At every moment I was reminded of him. But how has he painted Venice? Just as we have the face of a beloved friend re-produced by the daguerréotype, or by some bad conscientious painter—some fellow who gives us eyes, nose, and mouth by measure of compass, and leaves out all sentiment, all countenance; we cannot deny the identity, and we cannot endure it. Where in Canaletti are the glowing evening skies, the transparent gleaming waters, the bright green of the vine-shadowed *Traghetto*, the freshness and the glory, the dreamy, aerial, fantastic splendour of this city of the sea? Look at one of his pictures—all is real, opaque, solid, stony, formal—even his skies and water—and is *that* Venice? 'But,' says my friend, 'if you would have Venice, seek it in Turner's pictures!' True, I may seek it, but shall I find it? Venice is like a dream—but this dream upon the canvas, do you call *this* Venice? The exquisite precision of form, the wondrous beauty of detail, the clear, delicate lines of the flying perspective—so sharp and defined in the midst of a flood of brightness—where are they? Canaletti gives us the forms without the colour or light. Turner, the colour and light without the forms. But if you would take into your soul the very soul and inward life and spirit of Venice—breathe the same air—go to Titian; there is more of Venice in his 'Carnaro Family,' or his 'Pesaro Madonna,' than in all the Canalettis in the corridor at Windsor.*

* By the way, no one knows Canaletti's art who has not seen this aforesaid corridor. The collection is matchless.—Ed.

Beautiful they are, I must needs say it; but when I think of enchanting Venice, the most beautiful are to me like prose translations of poetry—petrifactions, materialities: 'We start, for life is wanting there!' I know not how it is, but certainly things that would elsewhere displease, delight us at Venice. It has been said, for instance, 'put down the church of St. Mark any where but in the Piazza, it is barbarous:' here, where east and west have met to blend together, it is glorious."

LORD EBRINGTON ON THE ARRANGEMENT AND VENTILATION OF HOUSES.

Lord Ebrington's lecture on the unhealthiness of towns, delivered in the Mechanics' Institution, at Plymouth, has been published by the Health of Towns Association.*

We take from it the following remark, and recommend the whole for wide distribution.

"With regard to ventilation in its largest sense, that of towns; by an improved arrangement of the streets, the expense I acknowledge would be formidable; but when it is remembered how many other useful purposes are effected by making streets straight instead of winding, wide instead of narrow, in continuous lines and free overhead, instead of discontinuous or connected only by archways, some expense would not be—indeed, we see daily proof that it is not—thought ill bestowed, in making our thoroughfares in large towns not only airier, but also drier, lighter, shorter, and more commodious for traffic, more cheerful and more handsome. When it is considered that the breath of human beings alone, exclusive of animals, in the metropolis, discharges into the air sixty tons of carbonic acid and sixty tons of water every day, it will be easier to appreciate the importance to health of allowing the freest access possible, not only to the light of the sun, but also to the purifying winds of heaven. Dr. Duncan, describing the well-like courts and alleys of Liverpool, speaks with enthusiasm of the delight with which he hails a hurricane or thunder-storm. No ordinary breeze has any effect in renovating the atmosphere of spots so completely hemmed in. Indeed, so strongly is the evil of the inevitable deterioration of the air of our enormous metropolis felt, that it is seriously in contemplation to establish villages for the residence of operatives in the neighbourhood of London, from which they would be daily conveyed to their work and back by the railways. The evidence of Captain Vetch as to the best mode of arrangement for the increments of towns is very interesting; as also what he says, and Mr. Butler Williams, on the importance of having accurate surveys made of every town, accessible to all who want them for the purposes of drainage, gas and water supply, &c. He shows the costly blunders and difficulties which result from the absence of such information. It is sufficient to say that additional streets ought to be made as nearly as possible parallel to the exterior lines of the town, with broad continuous communications across them nearly at right angles, and leading straight into the principal thoroughfares.

Now, with respect to the houses themselves, it is essential that they should never be placed back to back, nor even too close to allow of a fairly sized back yard or garden to each, accessible to light and air.

I will only mention one plan which I have adopted myself in building cottages on the estate which I have the management of, namely, the introduction of some air from the outside, through a pipe taken into an iron box at the back of the kitchen fire, whence it is conducted by another tube carried up the corner of the chimney into the bedroom above. In this manner a constant supply of warmed fresh air is furnished to the sleeping-room through a screen of wire gauze, which diffuses it without draught. The extra cost is so trifling, that it is not worth talking about. As a general principle it should be remembered that cold air is heavier than hot, and that consequently the breath and steam of the body, as well as the smoke and vapour from lamps and candles, has a tendency to ascend; the great object, therefore, is to have openings high up in a room. To prove this, Dr. Guy mentions a workshop in two stories without any opening; in the upper, ten out of seventeen, in the lower only one out of fifteen men working there, were affected by disease of the chest. Dr. Arnott, on the other hand, mentions a large sort of barrack at Glasgow, in which all the workmen of a factory lodged, from which fever was never absent. It was rendered quite healthy by carrying a tube from the ceiling of each room into the large factory chimney, the powerful draught of which secured a constant change of air for the inmates.

* C. Knight, London.

New Books.

An Exposition of the Danger of the Present Mode of Railway Construction, with Suggestions for its Improvement. By C. H. Greenhow. Weale.

The points urged in this pamphlet are, that a more perfect adjustment between the wheel and rail than at present exists, is necessary: that the only shape which can really give security under all circumstances, is the convex or round rail and concave tire, assisted by an inwardly inclined spoke, making the wheel in fact a cone, resting with its extreme edge on the rail; and that the tire, without the point on the surface of the rail perpendicular to its centre, ought to be so formed as to secure a perfect accordance between the wheels and the running surface of the rails, should either of them sink below the level of the other, or should the gauge separate so as to increase the distance between them.

A suggestion made by the writer to the effect, that all the carriages running on a railway should be of proportioned dimensions, seems worth consideration.

Gothic Ornaments drawn from existing Authorities. By J. K. Colling, Architect; Bell, Fleet-street. 1846. No. 1.

This promises to be a useful work. The first number contains four plates in lithography, including capitals from the choir of Ely Cathedral, quarter full size; wooden poppy-heads from Paston church, Norfolk, half full size; portions of rood-screen from Ludham Church, Norfolk, portion of mullion of screen, crocket from the canopy of doorway, examples of decorations enriched by gold and colour; and wooden spandrils from North Walsham Church, and Trunch Church, Norfolk, half full size.

We withhold an opinion until the work is furthe. advanced. The date should be given in all cases if possible.

Correspondence.

THE MADNESS OF BUILDERS.

Sir,—On last Friday, at the Sewers Office for the Westminster Division, there were let about 775 lineal feet of 18-inch barrel drain to be built in the line of the Old Ranelagh Sewer at Bayswater. I have taken the liberty of sending you a list of the tenderers and their amounts as a curiosity. I am, Sir, &c.,

July 7, 1846. Candid.

Johnson	£398	0	0
Mathison and Frost ..	298	17	0
Starkey	196	10	0
Yeomens.....	170	0	0
Austin.....	161	10	0

Austin's tender accepted.

The City of Mexico.—In the principal streets the houses are all constructed according to the strictest architectural rules. The foundations of the city were laid, and the first buildings were erected by Cortes, who did every thing well which he attempted,—from building a house or writing a couplet, to conquering an empire. Many of the finest buildings in Mexico are still owned by his descendants. The public square is said to be unsurpassed by any in the world; it contains some twelve or fifteen acres paved with stone. The cathedral covers one entire side, the palace another; the western side is occupied by a row of very high and substantial houses, the second stories of which project into the street the width of the pavement; the lower stories are occupied by the principal retail merchants of the city. The most of these houses were built by Cortes, who, with his characteristic sagacity and an avarice which equally characterised him in the latter part of his life, selected the best portion of the city for himself.—*Thompson's Recollections.*

Miscellanea.

IBRAHIM PACHA'S VISIT TO THE MANUFACTORIES.—It is an interesting reflection connected with Ibrahim Pacha's visit to the manufactories of England, says a writer in the "Literary Gazette," that, some three thousand years ago, many of these arts flourished in an eminent degree in the kingdom to which he is heir-apparent. In the manufacture of glass, for instance, which appears particularly to have excited his astonishment at Birmingham, the ancient Egyptians had attained a degree of perfection which, in some branches, has scarcely been equalled by the artificers of modern times.

When with just pride Britannia doth display
Before the wondering heir of Pharaoh's throne
Triumphs of art to other lands unknown,
Oh, may she not forget, in this her day,
That there was once, in years long passed away,
A time when all these arts so proudly shewn
To the Egyptian, were his nation's own!
And she who rules with such triumphant sway,
The realms of skill and science—where was then
Her glory? In the lowest form of man
Her children naked on the mountains ran,
Or shared the wolf and the hyena's den.
And if her heart beat high with the review,
May she be humble and be thankful too!

R. F.

INTERIOR DECORATIONS.—We learn that Sir Lionel Goldsmid is decorating in encaustic one of the rooms of his mansion, upon which he means to expend a thousand pounds. The work has been undertaken for him by—an eminent upholsterer! In the name of common sense, we ask, why will not such gentlemen employ artists, instead of persons who deface where they pretend to decorate? Cases of this kind are now of frequent occurrence; application is made to Mr. B. or Mr. C., who readily undertakes "the job,"—and how does he accomplish it? By cutting pages out of a few old or modern books, sticking them together, making up a pretty picture—and there is the design! Care to harmony he has none; uniformity of style is a matter of no moment; but it is essential to pick out a variety of pretty bits, and find an artist who will not spoil their effect by giving too much of his own work. We shall consider this matter more in detail ere long. It is grievous to know that every day large sums of money are paid to "decorators," who might as well be apothecaries for any knowledge of art they possess.—*Art-Union Journal.*

HAYDON'S ESTIMATE OF HIS PREDECESSORS.—Never were four men so essentially different as West, Fuseli, Flaxman, and Stothard. Fuseli was undoubtedly the mind of the largest range;—West was an eminent *macchinista* of the second rank;—Flaxman and Stothard were purer designers than either. Barry and Reynolds were before my time; but Johnson said, in Barry's Adelphi "there was a grasp of mind you found no where else;" which was true. Though Fuzeli had more imagination and conception than Reynolds—though West put things together quicker than either—though Flaxman and Stothard did what Reynolds could not do, and Hogarth invented a style never thought of before in the world, yet as a great and practical artist, in which all the others were greatly defective, producing occasional fancy pictures of great beauty, and occasional desperate struggles in high art, with great faults, Reynolds is unquestionably the greatest artist of the British school, and the greatest artist in Europe since Rembrandt and Velasquez.

ENTICING AWAY WORKMEN.—Some glass manufacturers at Sunderland recently brought an action against the proprietors of the British Glass Works, Newcastle-on-Tyne, for enticing away four of their workmen, and recovered 657*l.* 6*s.* 8*d.* damages.

GREAT WESTERN RAILWAY.—From returns made to the Board of Trade, we learn that the working stock of the Great Western Railway includes 127 engines, 232 passenger carriages, and 919 luggage vans, trucks, and carriages.

NAVAL ARCHITECTURE.—The Admiralty has issued instructions, under an order in council, for the revival of the school of naval architecture in the Portsmouth dockyard.

THE ROYAL ACADEMY has sent a donation of 50*l.* towards the fund for the relief of the widow and family of the late Mr. Haydon,

NOTICES OF CONTRACTS.

[We are compelled, by the interference of the Stamp Office, to omit the names of the parties to whom tenders, &c. are to be addressed. For the convenience of our readers, however, they are retained in a book, and may be seen on application at the office of "The Builder," 2, York-street, Covent Garden.]

For the execution of the remaining portion of the Cumnock extension of the Glasgow, Paisley, Kilmarnock, and Ayr Railway.

For the execution of the Junction between the Glasgow, Paisley, Kilmarnock, and Ayr Railway, and the Kilmarnock and Troon line.

For the construction of the extension line of the Chester and Birkenhead Railway, from Grange-lane to Bridge-end, in the township of Birkenhead.

For repairing and making good the ceilings of the Sculcoates Union Workhouse.

For whitewashing the walls of the Sculcoates Union Workhouse.

For taking on a repairing lease, for 21 years, six houses in Bunhill-row.

For taking on a building lease for 61 years, a piece of vacant ground behind Bunhill-row.

For a supply of cast-iron pipes for the Liverpool and Harrington Water-Works (promptly).

For the disposal of a powerful fire-engine, with all necessary apparatus.

For the supply of broken Guernsey granite for the New Cross Turnpike Road Trustees.

For a supply of flints for the New Cross Turnpike Road Trustees.

For building about 2,200 lineal feet of quay wall at Glasgow.

For fitting up the church of Wimborne Minster, Dorset, with gas for evening service.

For the disposal to a machinist, engineer, or smith, of a jobbing trade of 20 years' standing, with forges, tools, lathes, vices, &c.

For widening and modifying the bridge at Innishannon, on the road from Cork to Skibereen.

For the erection of a district military prison at Cork.

For the mason's and bricklayer's work required in the erection and completion of a new manufactory at Sheffield.

For the plasterers' and slaters' work required in the completion of a new manufactory at Sheffield.

For the joiner's and carpenter's work required in the erection and completion of a new manufactory at Sheffield.

For the plumber's and glazier's work required in the erection and completion of a new manufactory at Sheffield.

For the painter's work required in the completion of a new manufactory at Sheffield.

For the disposal of a long-established business in the iron-founding and ironmongery line.

For the erection of a farmhouse and outbuildings near Newmarket.

For the cast-iron bridges required for the Edinburgh and Northern Railway.

For the letting of a valuable stone quarry, in the parish of West Monkton, near Taunton.

For the execution of the first contract for works on the branch of the Edinburgh and Northern Railway, from near Thornton, by Lochgelly, to Dunfermline.

For the execution of the second contract for works on the branch of the Edinburgh and Northern Railway, from near Thornton to Dunfermline.

For the execution of the third contract for works to be done on the branch of the Edinburgh and Northern Line, from near Thornton to Dunfermline.

For the execution of the first part of the Newport extension of the Edinburgh and Northern Railway, from the town of Cupar to the village of Leuchars, including the works from Cupar to near Dron, a length of about 4 miles.

For the erection of the second part of the Newport Extension of the Edinburgh and Northern Railway, from Cupar to Leuchars, including the works from Dron to Leuchars, a length of about 3½ miles.

For the execution of all the works necessary for the erection of the high level bridge over the Tyne, on the Newcastle and Berwick Railway (extension of time).

For the execution of the Viaduct through Gateshead, on the line of the Newcastle and Berwick Railway (extension of time).

For the execution of the Viaduct through Newcastle, on the line of the Newcastle and Berwick Railway (extension of time).

For building and completing a new Mansion House in Banffshire, Scotland.

For letting a Slate Quarry at Appin, Scotland.

For the execution of an improvement in Lydgate-lane, Sheffield.

For the erection of additional buildings at the Salop Lunatic Asylum.

For the widening of Topsham bridge.

For the improvement of the approaches to Topsham bridge.

For the excavator's work required for the intended Industrial Training Schools for Pauper Children of the township of Leeds (promptly).

For the disposal of a wholesale and retail ironmongery business in Bradford.

For the erection of a barn and hovel at Newbottle, near Houghton-le-Spring, in the county of Durham.

For the erection of a barn, stable, and hovel at Over-the-hill, near Houghton-le-Spring, in the county of Durham.

For the disposal of a builder's stock in trade at Llangattock, Crickhowell.

For the erection of a farmhouse at Maesyronen, county of Radnor.

For the erection of a new bridge over the River Worm (promptly).

For the making of a new cut to alter the course of the river Worm (promptly).

For the disposal of the Earl of Ducie's Iron Works at Uley, near Dursley, Gloucestershire.

For plans and estimates for the restoration and repewing of St. Lawrence's Church, Reading, by an architect resident in Reading.

For building sewers in Bell-yard, in the City of London.

For building sewers in Gracechurch-street, in the City of London.

For building sewers in Laurence Pountney-lane and hill, and other places contiguous in the City of London.

For a supply of cast-steel files and rasps for the East-India Company.

For the disposal of a business for plumbers, glaziers, and painters, near the City of London, and established for twenty-six years.

For providing and fitting glass tops with the best tin frames to about 200 public lamps in St. James's, Clerkenwell.

For the supply of 9,000 running feet of flat Aberdeen Carlinose or other granite curbing 12 by 6 inches properly squared, and not less than 3 feet 6 inches in length, for the parish of St. John, Hackney.

For paving certain of the footpaths in the parish of St. John, Hackney, with York paving of the best quality.

COMPETITION.

A premium of 21*l.* will be awarded by the trustees of the Jephson Gardens, at Leamington, for the best set of plans, accompanied with a specification for laying them out. A premium of 10*l.* will be awarded for the second best plan.

APPROACHING SALES OF WOOD, &c.

BY AUCTION.

At Greenock: 105 logs and 12 Crotch pieces Honduras mahogany.

At Wheipleyhill, between Chesham and Berkhamsted: 544 beech timber trees, with tops; 993 beech poles, and some clean ash.

At Bristol: 80 pieces of English oak timber; also a quantity of larch railway sleepers, rails, and stakes.

At Whiteparish, Wilts: 307 large oak timber trees, 215 oak fitterns, 113 ash poles, 26 ash, and 16 beech trees, &c.

At Little Cornard, near Sudbury: 1,000 oak timber trees.

At Davis's Mart, Mark-lane: the whole of the plant and materials of the Experimental Railway on Wimbledon Common.

At Framsden, near Helmingham: a large quantity of oak top ends, gate posts, planks, &c.

At Inverary: a large quantity of growing and cut timber, chiefly larch and Scots fir of great size.

At Whittle Lodge, Essex: a large assortment of building materials. Day of sale altered.

At Dare's timber yard, Bermondsey, New-road, near the Bricklayer's Arms: the whole stock of planks, battens, deals, timber, mahogany, &c. &c.

At Southampton: 1,200 seasoned Memel and Petersburgh deals and battens.

At Southampton: a cargo of yellow and red pine, elm, deals, lathwood, &c., in suitable lots.

At the Custom-house Dock, Dublin: 100,000 feet Honduras mahogany, 28 to 40 inches in depth.

At the Workington Iron Works, Cumberland: 200 tons bar iron, in suitable lots for engineers, iron merchants, railway contractors, &c. Also upwards of 300 tons of pig iron. Time of sale now fixed.

At Llangattock, Crickhowell: a builder's stock in trade, &c.

At Knotting, near Higham Ferrers: about 1,200 oak timber-trees, with tops and ash spires.

At the Buck Inn: Annan New Tile Works, with three fields of excellent clay.

At King-street, Hammersmith: the good-will of an old established business for plumbers, painters, glaziers, house-decorators, and others, with stock in trade, shop fixtures, &c.

TO CORRESPONDENTS.

"*Cedar Wood.*"—The communication on this subject is postponed, as the signature appears to be accidentally omitted.

"*W. F.*"—Bloxam's "Principles of Ecclesiastical Architecture" (8th Edition), gives good general information. (Bogue, Fleet-street).

"*G. G. F.*"—Caen stone may be used externally without fear, if properly selected. An English stone is used externally for the Houses of Parliament, called Anston stone.

"*Citizen of the World.*"—The etching of Sir *J.* Brunel appeared to us to promise a good likeness, but we cannot speak positively.

"*J. M.* (York-street)."—The letter did not reach us in time. What are the particulars?

"*W. P.*"—Write for a penny pamphlet on the subject published by Churchill, Princes-street, Soho, London. Consult any elementary work on chemistry.

"*S. B. P.*" declined with thanks.

"*J.*" (Newbury).—The price of each part is 3*s.*

"*J. C.*"—Thanks.

Received.—"George Lock," "G. H." "Old England's Worthies," Part VI. (C. Knight.) "Pictorial Gallery of Arts," Part XVIII., Architecture. (C. Knight.)

ERRATUM.—Page 320, for "the small portal of William Horne," read "small portal of Wilton House."

ADVERTISEMENTS.

TO ARCHITECTS, BUILDERS, &c.

GAS LAMPS, GAS BRACKETS, GAS PILLARS, BURNERS, &c. &c. In calling the attention of architects, builders, &c., to their assortment of Gas Furniture in general, C. DEBAUFER and SON respectfully announce they continue to fit up premises of every description on the most approved and newest system of gas fitting. An experience of forty years justifies us in making the above assertion.—P.S. Country orders attended to with dispatch.

10 and 11, Creed-lane, St. Paul's.

MORTGAGE AND ANNUITY OFFICE, No. 129, CHANCERY-LANE.

PERSONS requiring LOANS by way of MORTGAGE or otherwise upon any available security, may at all times procure an advance to the extent of from 100*l.* to 150,000*l.*, or so much as the property will bear, by applying to Mr. BRAY, surveyor, at the offices as above, where a registry for the sale of estates, houses, land, life interests, and reversions, is kept for inspection.

N.B. To expedite the procuration, personal application at the office would in all cases be better, the party bringing with them the abstract of title, plans, &c.

DUTY OFF ORNAMENTAL WINDOW GLASS.

CHARLES LONG begs to inform his Friends and the Public, that he can now supply Ornamental Glass from 1s. 8d. per foot superficial; and borders from 9d. per foot, run; and having just built two of the largest Kilns in London, is enabled to execute extensive Orders with unprecedented dispatch, 1, Ring-street, Portman-square.—Terms, Cash only.

BRITISH and FOREIGN SHEET GLASS for Horticultural purposes, &c., may be had at JAMES BROMLEY'S, 315, Oxford-street, London, at the following reduced prices:—

In crates, containing about 260 feet, of coarse 13 oz., at 4½d. per foot, or fourth quality, 5d. per foot; ditto, 16 oz. coarse, 5½d.; ditto, fourth quality, 6d.; or cut to any size not exceeding 40 inches long by 10 inches wide at ½d. per foot extra. Also Microscopical Glass, French Shades, Plate and Crown Window Glass.—A discount to the trade.

TO THE PLATE GLASS TRADE.

THE BIRMINGHAM PLATE AND CROWN GLASS COMPANY, "Registered," beg to inform the Trade and Public, that the extension of their Works at Smethwick, near Birmingham, being now completed, their Warehouse, 141, Fleet-street, London, is now open for the Sale of their Crystal Plate Glass, which will be found to stand unrivalled by that of any other manufactory. They are also in a position to supply Rough Plate of any substance for Skylights or Floorings on the shortest notice.—Orders addressed to B. MOSS, Company's Warehouse, 141, Fleet-street, London, will be promptly attended to.

WINDOW GLASS, LEAD, VARNISH, and COLOUR MANUFACTORY.—Crown Window Glass, in squares under two feet, 4½d. per foot; glazing, 5d. per foot; sheet glass, 4d. per foot; best white lead, 26s.; seconds, 24s.; thirds, 22s. per cwt.; linseed oil, 2s. 2d.; boiled oil, 2s. 6d.; turpentine, 3s. 9d.; fine oak varnish, 10s.; carriage, 12s.; copal, 14s.; body copal, 20s.; gold size, 10s.; paper varnish, 10s.; linseed oil putty, 7s. 6d. per cwt.; per firkin; patent dryers, 42s.; black paint, 28s.; lead colour, 34s.; Oxford ochre, 42s. per cwt.; best pan water-closet, 34s. complete; ¾-brass cocks, 2s. 6d. each. Milled sheet lead, patent pipe, beer-machines, tapping-cocks, and brushes and colour of every description. Thomas Millington being the manufacturer, can supply a much better article than most other houses. Address, THOMAS MILLINGTON, 97, Bishopsgate-street Without, London.—Established upwards of 90 years.

SASHES primed, glazed, and sent to any part of London at 6d. per foot.

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Coloured and Ornamental Glass, Flatted Crown, and Sheet Plate, for Shop fronts, Shew-cases, &c. The largest stock of Cheap Glass in London for HORTICULTURAL PURPOSES.

Dry and Good Colours of the best quality; Brushes Dryers, and every article used in the Trade Warranted.

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For complete lists priced.—Address to R. COGAN, WINDOW GLASS, LEAD, and COLOUR WAREHOUSE, 5, Princes-street, Leicester-square, London.

HERRING'S PATENT SAFETY WINDOW.—All danger from cleaning or repairing windows at an end. No housekeeper should be ignorant of this invaluable invention. Simple, cheap, and effectual; will repay the cost every two years; add 5 to 10 per cent. to the value of houses. No one should buy or rent one without it. Now in full operation in most parts of the Kingdom. Builders and the public can inspect its real merits, and have licenses, at the Patent Steam Bed-feather Factory, 14, Kings-gate-street, London.—JOHNSON and PASK, Makers.

SHOP FRONTS, SASHES AND FRAMES, DOORS, &c. MADE FOR THE TRADE.

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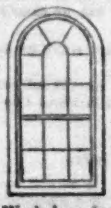


Beg to inform the Trade, and the Building Public in general, that they continue to manufacture Sashes and Frames, Shop Fronts, Doors, and all other kinds of Joiner's work, on the lowest possible scale of prices. All kinds of Wainscott and Mahogany Work done in the very best manner; French Polished, and carefully Packed for the Country.— A full list of prices forwarded by return of post to any part of the country.

CHAS. WM. WATERLOW,

Manufacturer of Sashes and Frames, and Joiner to the Trade, 121, Bunhill-row, Finsbury-square. Well-seasoned materials, superior workmanship, lowest prices. Upwards of 400 Doors and a large variety of Sashes and Frames always on Sale. Glazed goods securely packed for the country. Steam-struck Mouldings in any quantity.—N.B. This Establishment is worth the notice of all engaged on buildings.

ROYAL POLYTECHNIC INSTITUTION.—A new and interesting Lecture by Dr. RYAN, on the Phenomena and Effects of Heat and Cold, at half-past three daily, and on the Evenings of Mondays, Wednesdays, and Fridays, at nine o'clock. Prof. Bachhoffner's Lectures on Natural Philosophy, with brilliant experiments, daily. Macintoshe's Revolving Engine, Coleman's Patent Locomotive Engine for ascending and descending inclined planes, Farrell's Archimedean Railway, the Atmospheric Railway, all in action. Portraits of distinguished Men in the Government and Army of Lahore, magnified by the Opaque Microscope. The Oxy-hydrogen Microscope, exhibiting a fine Collection of Living Objects. A beautiful Picture of the Chapel in the Convent of St. Catherine, near Jerusalem, by Mr. Charles Smith, is one of the series of Dissolving Views just introduced.—Admission, 1s.; Schools, Half-price.

FINE ARTS.

By Her Majesty's Royal Letters Patent.

LORIMIER'S TRANSPARENT PLANES for Perspective Drawing; BENJAMIN WEST, Patentee.

"This Instrument will enable Artists and others to make any Drawing, whether from Nature or Models, in perfectly true perspective, so that a likeness or landscape may be taken in a few minutes absolutely perfect. It is used by her Majesty's Royal Sappers and Miners, Chatham. To Travellers it would be found serviceable, since it can be employed without the knowledge of drawing."—*Art Union.*

Price 18s. and 26s. Apply for Agents to BENJAMIN WEST, 2, St. James's-walk, Clerkenwell.—Sold by BARRITT and Co., 173, Fleet-street, London; GRIFFIN and Co., Glasgow, and by all Fancy Stationers, &c.

SNOXELL'S PATENT SAFETY REVOLVING WOOD SHUTTERS,

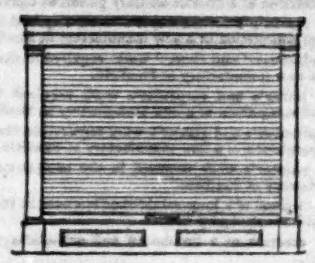
Manufactory, 96, Regent-street, and 131, Chancery-lane.

THE Patentee can confidently recommend these Shutters both for security and durability. The edges being sheathed with IRON, and the cost little more than common shutters, their construction so simple, that the largest establishment can be opened or closed in a few moments with the greatest possible ease without the use of machinery. Their superiority over other Revolving Shutters consists in being made without metal hinges, consequently cannot rust, buckle, or get out of order, and are equally safe. W. SNOXELL will have much pleasure in giving reference to numerous establishments where they are fixed, having on all occasions given the greatest satisfaction.

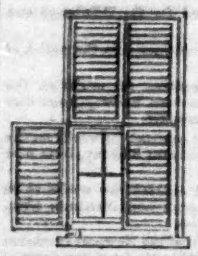
IMPROVED PATENT CONVEX IRON REVOLVING SAFETY SHUTTERS.

PATENT SAFETY IRON SLIDING SHUTTERS.

PATENT REVOLVING PERFORATED BLINDS.



PATENT OUTSIDE SHUTTERS, VENETIAN, CORRUGATED, AND CARRIAGE BLINDS.



The attention of Architects, Builders, Blind Makers, and the Trade generally, is particularly requested to the IMPORTANT patented IMPROVEMENTS in the above enumerated Articles, and inspection invited, at the Manufactory of the Patentees, R. HOWARD and Co., 115, Old Street, London; or at the Licensees.

Engravings and Prospectuses may be had at the above address, or will be forwarded on application.

The great importance of STRENGTH and STIFFNESS in the Laths of REVOLVING IRON SHUTTERS, when required for SECURITY, is so obvious, that it is only necessary to point out the fact that the PATENT CONVEX LATHS ARE 12 TIMES STRONGER THAN THE ORDINARY FLAT LATHS (as shewn by the engravings and prospectus), to ensure their general adoption.

REVOLVING IRON SHUTTERS MADE OF THE COMMON FLAT LATHS, AT A VERY CONSIDERABLE REDUCTION OF PRICE.

CAUTION.—The Patentees beg to caution all persons against Making or Using BENT LATHS for REVOLVING IRON SAFETY SHUTTERS, so as to obtain increased strength or stiffness; as they thereby render themselves liable to legal proceedings for infringing this patent.

Licenses Granted.

REDUCTION IN THE PRICE OF
BUNNETT AND CORPE'S
PATENT REVOLVING IRON SHUTTERS.

THE validity of this Patent being completely established, the Patentees have much pleasure in stating that the very extensive demand, and the employment of improved machinery in the manufacture, have given them an opportunity (of which they gratefully avail themselves) of making a considerable reduction in the price of this well-known and tried invention, thereby rendering them the cheapest as well as the best iron shutters in use. Every improvement suggested by practical skill and most extensive application has been adopted, and no effective REVOLVING IRON SHUTTER can be constructed without infringing B. and C.'s patent. The worm and wheel, as patented by them, being the only safe, durable, and efficient mode of raising and lowering such shutters, these shutters can be applied horizontally, either above or below the window, or vertically, as introduced by BUNNETT and CORPE, in some of the largest establishments: they are made with bent or corrugated laths, if required.

BUNNETT and CORPE also manufacture

REVOLVING WOOD SHUTTERS,

with their patent raising machinery, or with counterbalance weights, and with proper metallic hinges, without which no shutters can be safe or durable.

BUNNETT and CORPE are likewise Patentees and Manufacturers of METALLIC SASH-BARS, MOULDINGS, &c., IN BRASS, COPPER, OR ZINC, FOR SHOP FRONTS, WINDOWS, SKYLIGHTS, AND VARIOUS OTHER PURPOSES.

Shop Fronts fitted in a superior manner with Iron Shutters, Patent Brass or Zinc Sashes, Moulded Engraved Stall Board Plates, best Plate Glass, and internal Brass Fittings of all kinds, on the most advantageous terms. Estimates given and contracts taken in Town or Country.—All kinds of metal works executed to any design. Metal Drawing, Rolling, and Stamping for the Trade. OFFICE, 28, LOMBARD-STREET, LONDON. WORKS, at DEPTFORD, KENT.

PORTER'S CORRUGATED, and PATENT GALVANIZED IRON ROOFING WORKS, Southwark-bridge (and the Grove), Southwark. At the above Works, the Public are secure in having the superior make, and by the Patent process of Galvanising Iron as first introduced into this Country, with many improvements in its application to Roofs, Buildings, &c. Every description of Building, Railway, and other Iron and Smith's work Manufactured of the best quality. Iron Fence and Hurdles as usual.—The Trade Supplied.

PATENT GALVANISED TINNED IRON.
(MOREWOOD AND ROGERS' PROCESS.)

ARCHITECTS, SURVEYORS, BUILDERS, and CONTRACTORS are respectfully informed they can be supplied with this invaluable metal for building purposes, of the best quality and lowest terms. It is superior in every respect to zinc, and two-thirds less price than 7lb. sheet lead for roofing, no woodwork being required, but iron rafters only, 21 inches apart, rendering the whole roof fire-proof. This mode of covering roofs is cheaper than Lead, Zinc, Tiles, or Slates. Parapet and other Gutters formed and fixed, also rain-water pipe, heads, eave gutter, baths, stove and funnel pipe, cisterns and water-closets fixed. The sheets are 6 feet long by 2 ft., 2 ft. 6 in. and 3 feet wide, and 90z. to any required weight per foot, and can be had either plain or corrugated.

Please apply to CHARLES GELL, Junior, No. 8, Quick-set-row, New-road, St. Pancras, where references and testimonials of the highest respectability of extensive works already done can be had.

WALLIS'S PATENT LIQUID WOOD KNOTTING.—This newly-discovered Liquid Composition which Messrs. Geo. and Thos. Wallis have the satisfaction of introducing to the trade, possesses the important qualification of effectually stopping Knots in Wood, however bad, and preventing them eating through and disfiguring the paint above.

Many substances have been used and much time spent in endeavouring to find a cure for a bad Knot, but hitherto without success. Messrs. Wallis therefore feel much pleasure in offering to the public an article so long and anxiously called for.

In the application, skill is not required; it is put on to the work with a brush like common paint, can be used in all climates and situations, and does not require heat.

Sold wholesale and retail, by Messrs. G. and T. Wallis, Varnish, Japan, and Colour Manufacturers, No. 64, Long Acre. Price 20s. per gallon.

STEPHENS'S LIQUID OAK, MAHOGANY, ROSE, and SATIN WOOD STAINS, for Staining various sorts of Inferior Woods, so as to give them the appearance and character of the more costly and ornamental kinds; also for reviving the natural colour of Wood Carvings and Panellings, and other ornamental Wood Work, when such has become faded from age or other causes.

IN THE BUILDING AND DECORATING NEW CHURCHES, where it is desirable to give to the cheaper kind of Woods the appearance of Antique Oak, or to make Deal assume the character of Oak Panelling, whereby the effect of the more costly may be produced by the use of a cheaper material, these Stains will be found more effective than any means hitherto employed.

IN OLD MANSIONS AND HALLS, where the Wood Carvings and Panellings have faded, the applications of these Stains will be found to revive and bring back the rich natural colour, and which colour may be varied from the lighter to the deeper shades of the most Antique Oak.

The BIRCH WOOD, which has a fine natural grain, with little colour, is particularly suited to the application of these Stains; and the appearance which it assumes after Staining is so near that of the natural wood, that is is only when the grain and colour of the latter is particularly fine that it is preferred. Beech, Birch, Elm, Ash, and other Woods, English and Foreign, receive the Stains and produce various imitations.

For the exposed Timbers of the inside of the ROOFS of CHURCHES, for which north country Timbers and Deals are generally used, by brushing them over with the Stain, which operation is very rapidly, and of course economically, effected, the appearance of an Oaken Roof will be produced. For colouring the backs of the Seats, Pews, the fronts of Galleries, the Pulpit, &c., it is equally advantageous.

Prepared by HENRY STEPHENS, and may be obtained at 54, Stamford-street; at the Office of "The Builder," 2, York-street, Covent-garden, and in Manchester, at CRAKE'S MARBLE WORKS, Garratt-bridge, David-street, at which places specimens of their application may be seen.

TO ARCHITECTS, BUILDERS, & BRICK MAKERS.

PUMPS of Superior CONSTRUCTION, bored perfectly true by improved machinery, in various plain and ornamental patterns for Conservatories, Squares, Market Places, Roads, Gardens, and for Liquid Manure. BRICKMAKERS' PUMPS, in Wrought and Cast Iron, HYDRAULIC LIFT PUMPS, and ENGINES for Wells of any depth. SINGLE and DOUBLE PUMPS up to 12-inch bore, kept for Hire.

BENJ. FOWLER, 63, Dorset-street, Fleet-street.

BUILDERS' CASTINGS, Beams, Pillars, Air-bricks, Eave-gutters, Pipes, and every description of builders' castings; also Turntables, Cranes, Water-cranes, Weighing-machines, and all apparatus connected with railways; also engines of every kind and size may be obtained of the best description and at the lowest possible price, by applying to JAMES CURRIE, 16, Wellington-street, North, Strand, London. There is a communication by steam-packet with the works at Aberdeen, twice a week.

TO ARCHITECTS AND BUILDERS.

DOOR SPRINGS AND HINGES.—GERISH'S PATENT DOOR SPRINGS, for CLOSING every description of DOOR, consists of Single and DOUBLE-ACTION BUTT HINGES in Brass and Iron for Doors to open one or both ways, and Rising Hinges for the convenience of Doors opening on uneven Floors. Likewise Swing Centres, which consist of a combination of power unequalled by any made at present. Manufactured by F. W. Gerish, East-road, City-road; and sold by all respectable Ironmongers in the United Kingdom.